JOURNAL
OF THE
AMERICAN PHARMACEUTICAL ASSOCIATION

Vol. VI AUGUST 1917 No. 8

PUBLISHED MONTHLY BY

AMERICAN PHARMACEUTICAL ASSOCIATION

Office of Publication: Easton, Pa.
Editorial Office: 253 Bourse Building, Philadelphia, Pa.

Annual Subscription, $4.00; Single Numbers, 35 Cents

Entered as Second-class Matter January 23, 1917, at the Post Office at Easton, Pa., under the Act of March 3, 1879.

ANNUAL CONVENTION OF AMERICAN PHARMACEUTICAL ASSOCIATION AT INDIANAPOLIS, AUGUST 27 TO SEPTEMBER 1, 1917. HEADQUARTERS, CLAYPOOL HOTEL.

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J. W. ENGLAND, Secretary of the Council,
415 North 33rd Street, Philadelphia, Pa.

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LYMAN SPALDING, M.B., M.D.

Born at Cornish, N. H., June 5, 1775.
Died at Portsmouth, N. H., October 21, 1821.

The Originator of the United States Pharmacopoeia.
(January 6, 1817.)

"To medicine in all its branches he gave his life."

Lyman Baldwin

JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

VOL. VI AUGUST, 1917 NO. 8

DR. LYMAN SPALDING.—THE FIRST PHARMACOPOEIA OF THE UNITED STATES.

The Historical Introduction in U. S. P. IX begins with these lines (p. V): "In January, 1817, Dr. Lyman Spalding, of New York City, submitted to the Medical Society of the County of New York a project for the formation of a National Pharmacopoeia."

Through the courtesy of Dr. James Alfred Spalding, we are enabled to present the frontispiece of this issue, and some of the data of this writing are taken from a book on the Life of Dr. Lyman Spalding* by his grandson, named above, and published by W. M. Leonard, Boston, 1916.

Lyman Spalding was born June 5, 1775, in Cornish, N. H. His father was Dyer Spalding, born in Plainfield, Conn., November 14, 1732, and his mother, Elizabeth Cady Spalding (nee Parkhurst), born July 7, 1734. It is not the writer's purpose to go into the history of these families, therefore, suffice it to say that Dyer Spalding was a soldier and officer in the Colonial wars and served with General Israel Putnam.

The originator of the National Pharmacopoeia received his first medical instruction of, and for many years worked with, Dr. Nathan Smith, founder of the Medical Schools at Dartmouth, Yale and Bowdoin. After his academic education in Cornish, Lyman Spalding accompanied Dr. Smith in his practice, and in 1794 he entered Harvard Medical School where, in 1797, he was examined for his medical degree, the subject of his thesis being, "On Animal Heat." Dr. Spalding was always a student, and a reference to his further studies nor to his practice and investigations, that would do justice to the subject, cannot be attempted in this sketch. He was lecturer on chemistry and materia medica at the Dartmouth Medical School from 1797 to 1799; lecturer on anatomy and surgery, and president of the Fairfield Medical School from 1810 to 1812, and president of the College of Physicians and Surgeons of the Western District of New York, 1813–1817.

It is of interest that vaccination was introduced during the period of Dr. Spalding's medical practice, and among the practitioners of his day he established a well-deserved reputation as a successful physician and teacher, and the profession profited by his research. He studied drugs and their therapeutic value, and this study made the American Pharmacopoeia possible. The author of the book referred to states, that Dr. Spalding first obtained the idea of a National Pharmacopoeia from Barton's "Collections for an Essay toward a Materia Medica for the United States," read before the Philadelphia Medical Society, February 21,

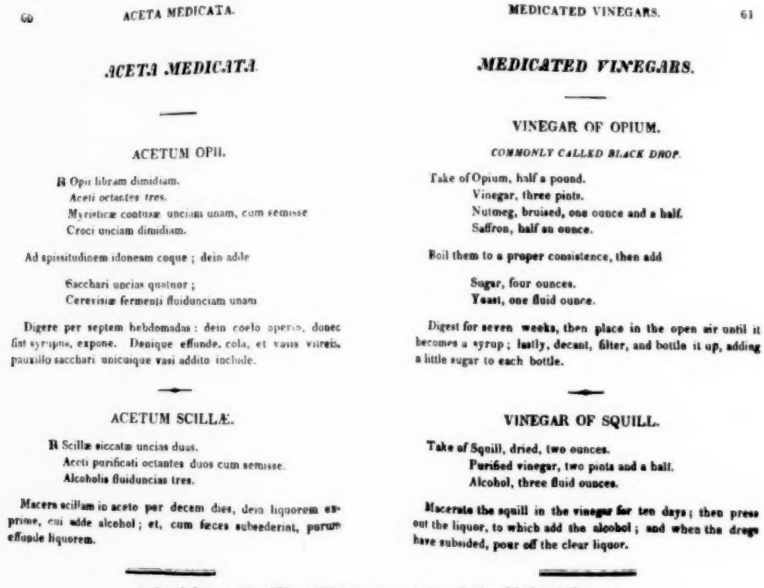
* Stanhope Press, F. M. Gilson Company, Boston. For the loan of the book we are indebted to W. D. Grace of Portsmouth, N. H., and the Portsmouth Athenæum.

1798. The author also further expresses his opinion that when his grandfather visited in Philadelphia, in 1809, and saw Dr. Barton daily, he conversed with him on the possible chances of ever composing a work so much needed by physicians.

The credit, however, for the U. S. Pharmacopoeia belongs to Dr. Lyman Spalding, for the first edition had its beginning when the needs of a National Pharmacopoeia were set forth by him in a paper read before the New York Medical Society, Monday, January 6, 1817. The committee appointed at that time afterward held meetings at the home of Dr. Spalding, and he unquestionably carried the larger burden and worries of the work, which was concluded when the first edition of the Pharmacopoeia of the United States appeared, December 15, 1820, printed by Wells and Lilly of Boston and copyrighted on the same date by Ewer and Bedlington, Cornhill, Number 51. The final galley proofs of this edition are now in the hands of Dr. James Alfred Spalding. The book has 274 pages and is about 10 by 6 inches in size. The work constitutes an era in the profession and this is the centennial year of its active beginning. It is of interest that the Surgeon General of the U. S. Army, Dr. Joseph Lovell, purchased 96 copies soon after the book was ready for delivery, thus giving his approval of the work.

Quoting the author, "The publication of the Pharmacopoeia was the culminating point in the career of Dr. Spalding, for about the time that the book was issued from the press he was walking along Pearl Street, New York, when he was hit on the head by a box of rubbish falling from a second story window;" from the effects of the injury sustained he never recovered. He left New York for his old home at Portsmouth, arriving there October 17, 1821, and four days later passed away.

A well-known contemporary, Dr. Samuel Latham Mitchell, in announcing his unfeigned regret soon after the death of Dr. Lyman Spalding, said of him: "His mild and amiable character, his ingenuous deportment, and his native zeal and assiduity to maintain the dignity of the profession, and improve its many branches, will cause many to lament the cessation of his labors; but his intimate friends, alone, knew how pure and disinterested were his motives. He was the Original Projector of our National Pharmacopoeia and aided with unremitting diligence in bringing the work to its present form," (1821). E. G. E.



60 ACETA MEDICATA.

ACETA MEDICATA.

ACETUM OPII.

℞ Opii libram dimidiam.
Aceti octantes tres.
Myristicæ contusæ unciam unam, cum semisse
Croci unciam dimidiam.

Ad spissitudinem idoneam coque; dein adde

Sacchari uncias quatuor;
Cerevisiæ fermenti fluiduncium unam

Digere per septem hebdomadas: dein coelo aperto, donec fiat syrupus, expone. Denique effunde, cola, et vasis vitreis, pauxillo sacchari unicuique vasi addito include.

ACETUM SCILLÆ.

℞ Scillæ siccatæ uncias duas.
Aceti purificati octantes duos cum semisse.
Alcoholis fluiduncias tres.

Macera scillam in aceto per decem dies, dein liquorem exprime, cui adde alcohol; et, cum fæces subsederint, parum effunde liquorem.

60 MEDICATED VINEGARS. 61

MEDICATED VINEGARS.

VINEGAR OF OPIUM.

COMMONLY CALLED BLACK DROP.

Take of Opium, half a pound.
Vinegar, three pints.
Nutmeg, bruised, one ounce and a half.
Saffron, half an ounce.

Boil them to a proper consistence, then add

Sugar, four ounces.
Yeast, one fluid ounce.

Digest for seven weeks, then place in the open air until it becomes a syrup; lastly, decant, filter, and bottle it up, adding a little sugar to each bottle.

VINEGAR OF SQUILL.

Take of Squill, dried, two ounces.
Purified vinegar, two pints and a half.
Alcohol, three fluid ounces.

Macerate the squill in the vinegar for ten days; then press out the liquor, to which add the alcohol; and when the dregs have subsided, pour off the clear liquor.

A leaf from the First Pharmacopoeia of the United States.

EDITORIAL

E. G. EBERLE, Editor 253 Bourse Bldg., PHILADELPHIA

THE ANNUAL MEETING OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

NEVER before in the history of the American Pharmaceutical Association has there been such urgent necessity for a large attendance at an annual convention. Pharmacy has an opportunity, which if grasped speaks for advancement, while indifference or neglect may mean retrogression. The American Medical Association is supporting the efforts of the American Pharmaceutical Association for professional recognition of pharmacists by the Government, and the officials have given a hearing to our representatives. The work has only started, but there has been progress; your officers have been unceasingly at work, have given their time, and now ask that you counsel further with them at the Indianapolis convention.

Narcotic laws have been amended and new ones enacted, and satisfactory control of the traffic in narcotic drugs seems assured, a consummation long hoped for. The results of the legislation will be part of interesting reports. The increasing tax measures, in which every member is vitally interested, will be discussed and your coöperation will unquestionably mean money to you.

You have an interest in the Pharmacopoeia and National Formulary as well as the A. Ph. A. Recipe Book; you should participate in a discussion of these publications and in that way make all of them better and more serviceable. Reports and papers dealing with them constitute part of the programs of several Sections.

The report of the Treasurer for the fiscal year of 1916 will be found in this issue, and the figures are pleasing; you can "do your bit" by bringing in a few additional members; no one should have less than one new application to his or her credit.

The Year Book of the Association has been issued and mailed to the members; the next one is already in preparation.

As every year, many valuable papers will be read before the various Sections, and no matter what phase of the drug business concerns you most, there will be much to interest you. Several illustrated lectures have been provided for.

The House of Delegates this year offers an opportunity to coördinate the ideas that have been developing since its establishment. Every state association, represented by member delegates, will have a voice in providing for the functions so that this body may be of greatest service in bringing them together and for planning their coöperative endeavors.

The invitation to come and participate is largely directed to new members and to those who have never attended a meeting of the American Pharmaceutical Association, for a first attendance almost invariably brings a "repeat order," hence year after year, many of the same faces are seen at the annual meetings, one of the very best endorsements that any association can have. Make your arrangements to come, now.

E. G. E.

THE AMERICAN PHARMACY FAIRCHILD SCHOLARSHIP.

ON account of the very short notice that it was possible to give, only one candidate presented himself for the Fairchild Scholarship examinations held June 25th. It was, therefore, impossible to award the Scholarship; however, an adjourned meeting for further examinations will be held September 26, 1917.

The candidates must be graduates of a four-year high school course and have had two years' drug store experience, and the examinations are to be conducted under joint supervision of a school of pharmacy, belonging to the American Conference of Pharmaceutical Faculties, and of the State Board of Pharmacy. While the dean and president, respectively, have been named for this supervision, it is assumed that they may delegate representatives. The examination questions relate to elementary chemistry, elementary materia medica, practical pharmacy and prescription reading, and elementary business knowledge.

The questions will be supplied to the presidents of the Boards of Pharmacy and the deans of the Colleges of Pharmacy of the American Conference of Pharmaceutical Faculties; such orders must be sent to the editor of the Journal of the American Pharmaceutical Association, 253 Bourse Building, Philadelphia, and be under the seal of the board or college. The candidates' credentials and also the answers to the examination questions must be sent to the editor of the Journal, who will turn them over to a committee for grading them; the answers should bear a mark of identification but not the name of the candidate. The editor is not a member of the latter committee.

The award of the Scholarship will be made on the basis of 70 for the examination record and 30 for the credentials. For further reference to the Scholarship, see p. 440, May 1917, Journal American Pharmaceutical Association.

E. G. E.

THE PHARMACIST'S INTEREST IN PRELIMINARY EDUCATION.

NOTHING means more to the nation than the teacher's work, and this is applicable to every industry and profession, not only in a deductive sense, but specifically. It can as truly be said that the embryo pharmacist is developed under the training of the teacher as that the citizenship is molded under

the same direction. Indifferent teaching, cultivation of careless and slovenly habits of work and thought cannot produce a very high type of citizenship nor do such methods fit the minds for technical school education nor prepare the young men and women to achieve success in business or professional life.

The substance of the thought is not new, only expressed differently than by the words of others, and here to emphasize that pharmacists should give more attention to our schools and that they, as citizens and in the interest of pharmacy, should, in every way possible, assist in shaping the educational system of our public schools. The neglectfulness of citizens generally of this highly important matter is deplorable. Critics are ready to point out deficiencies, but there is a lack of the encouraging spirit which will stimulate more men and women engaged in teaching to greater efficiency in their work; the inducements for persuading those who would perhaps be better qualified for teaching are not to be compared with the opportunities in other lines for capable persons who are determined to succeed, and not in later life become dependents.

If the salaries of teachers are to be based on a scale much lower than for work which requires far less sacrifice and devotion of time, entails less wear on the nervous system, then provision should be made for pensioning teachers after a determined number of years of service. If adequate salaries are paid or assurance made that, on account of lack of opportunity to provide for later years, they are given an annual honorarium, then more who are qualified to teach will select teaching for a vocation and means of livelihood, for, assuredly, the honor of building the characters and assisting in developing the minds of those who become the makers of history and of the industries is attractive and in itself a reward.

Having thus endeavored to pay a tribute to the teachers and acknowledged a duty to them for the important service that they render, reasons will be assigned for some of the statements relative to educational shortcomings and an attempt made to present ideas in that connection which again are not new, in fact have been brought forward for centuries, but like the ideal of all undertakings still remains to be achieved.

More than two hundred years ago, Dr. William Harvey wrote in the preface of one of his works, "Those who, reading the words of authors, do not form sensible images of the things referred to, obtain no true ideas, but conceive false imaginations and inane phantasms." We would go further in drawing conclusions and say that the mind is blurred; worse than useless, the effect is harmful. It is quite generally conceded that much reading for simple gratification and without a purpose to intelligently absorb some of the thoughts embodied is at least valueless. So also studying of subject matter that is not comprehended and without attempting to grasp its meaning weakens both the intellect and memory and gives neither discipline nor content. While it must be admitted that the study

of Greek and Latin, provided the languages are really understood, gives the students mental discipline, the percentage of those who acquire such proficiency is small, and it would be far better if the philosophers and historians were studied in the translations.

Teachers in schools of pharmacy are painfully aware that a large number of their students are not prepared to acquire a knowledge of the subjects they endeavor to teach them. This is especially true in the study of physics and chemistry and even that of the mathematics of pharmacy. There is a deficiency somewhere in the system of school education; the interest of the pupils is not sufficiently excited to an understanding that enables them to thoroughly apply the knowledge. There must be a lack of meaning to them in what is taught, however potent the system may be for disciplining the mind.

Books are necessary as guides; as references, they contain the authors' analyses of the subjects presented, but to make this information available to the young minds, teachers must emphasize the meaning, explain the underlying reasons, elucidate the reasoning of the analysis which the author seeks to convey. Discipline of the mind by studies is necessary but they are in a degree meaningless or at least have not the value needed for active life unless the words and symbols are available for summarizing experiences—develop reasoning, encourage analysis —stimuli that compel action. Herein is probably the difficulty—that which is studied is not comprehended, it does not "electrify." There is too much memorizing and as a result when a known subject is presented in a somewhat different way there arises a confusion in the minds of the pupils, followed by a resort to guess. The subjects should be so taught that the rule, the words or the symbols are essential as a means of instruction; by themselves inane, valueless, unless they are true measures and their purposes fully comprehended—the intelligent application is the important thing, whether this is concerned with history, mathematics, chemistry or any other study. The thought that we are endeavoring to impress has been expressed in this way by another, "the value of any fact or theory as bearing on human activities, in the long run, is determined by practical application—that is, by using it for accomplishing some definite purpose." There must not only be a knowledge of the subject but an intelligence to apply it.

A large percentage of the students coming to schools of pharmacy are not prepared to apply the essence of the rules of simple mathematics in actual pharmaceutical practice, and the students are exceptional who can utilize their preliminary studies of physics and chemistry in the laboratory, in fact, the learning they have often discourages them to such an extent that chemistry which should be of the liveliest interest is a subject feared by many. They have studied it bookishly instead of practically; they have been deprived of opportunities; their minds have been loaded with material that is of little or no value. It is not said that the

courses in colleges of pharmacy are perfect by any means, but the methods of teaching in public schools are under consideration.

Huxley said, "The great end of life is not knowledge but action. What men need is as much knowledge as they can assimilate and organize into a basis for action; give them more and it may become injurious." This carries only part of the thought we seek to awaken; the other is that if the methods of communicating knowledge were not at fault the energy and time given in an educational course, not overburdened with valueless material, would be productive of better results. The value of the sciences is derived from such knowledge of them that makes them available in practice.

Dr. Nicholas Murray Butler has said, "the first question to be asked in any course of study is, 'Does it lead to a knowledge of our contemporary education?' If not, it is neither efficient nor liberal."

Professor John M. Gillette has made this statement, "I have no hesitancy in declaring that the first and foremost duty of society, through the agency of schools, is to make every boy and girl fit to make a living by means of some special knowledge or skill which society has need of."

The teacher can only efficiently instruct in those branches with which he or she is thoroughly familiar. This preparedness characterizes the teacher who makes the subject interesting and speaks for successful teaching. In order to prepare students for the technical and professional schools, teachers must familiarize themselves with the needs of the trades and professions; not unless they have taught the fundamental branches so that the students can make intelligent use of the knowledge, have the teachers performed their duty to them.

Huxley in an address on *Science and Art in Relation to Education*, said, "to teach the elements of any subject requires most careful consideration, if you are a master of the subject; and if you are not a master of it, it is needful you should familiarize yourself with so much as you are called upon to teach—soak yourself in it, so to speak—until you know it as a part of your daily life and daily knowledge, and then you will be able to teach anybody."

Frederick M. Davenport has well said, "Let none suppose that any crowd of American college boys ever sat for one year or two years at the feet of a college professor without knowing the substance of that man. There is nothing human that I know of so near the infallible as the final estimate that college men put upon an instructor. His foibles they know. If he is sound at the core they know it; if he is not, they know that. No college professor ever got away from the real judgment of his own boys, though he may have fled to the uttermost parts of the sea."

The mind of the scholar should be brought into direct relation with fact, not merely be told a thing but made to see it by his own intellect and ability that the thing is so and not otherwise. Using the words of Abraham Flexner for this thought (*Atlantic Monthly*, April 1917), "Science, literature, history, modern languages, industrial processes would be taught *because* they answer the questions which live people ask and can be led to ask or because they in their substance minister to our

needs, capacities or aspirations—taught, that is, because they *serve* purposes and in order that they *may* serve purposes."

Aside from the interest every citizen has in schools, pharmacists are concerned in educational systems that prepare the youth so that they can readily apply that which they have been taught in a practical way, in business life, and the schools of pharmacy will show better results if the preliminary education and training has made the students observant and developed in them an analytical mind, a conception that education is not for the mere sake of acquiring knowledge but also for making good use of it.

The instillation of the disciplinary purpose of study is often so strongly fixed in the minds of students that even those who attend schools of pharmacy fail to realize that their laboratory work here is for the purpose of making them proficient and that they will do just this kind of work when they actively engage in the drug business. Indeed a very large percentage of the graduates experience a relief when their College days are over, and thereafter do not make that wider and practical application of what they have been taught in the sciences underlying pharmacy for which they presumably gave their time, study and money while at school. As before they entered college they seem to be willing to let others do their thinking and investigating; their knowledge of pharmacognosy and chemistry is largely neglected instead of being put to practical use. There is a constant proclaim that "commercial" pharmacy is the important thing when really the commercial value of the sciences taught in the schools of pharmacy is largely overlooked as an integral, instead of utilizing the knowledge thereof in work that can be, and is by others, made to bring financial returns and at the same time gives a professional standing to the pharmacist.

But the message is a call to the pharmacists to exhibit a deeper interest in the movement for more efficient educational methods which mean so much in developing a citizenship that can industrially and intelligently compete with that of other nations. More than ever before have the educational methods of European countries been studied, and we do know their educational systems, that are closely linked with manufacturing and agricultural interests and the professional lines, have made their existence, if not their past prosperity, possible.

The preliminary educational demands of schools of pharmacy, even when measured in counts and points, may mean very little; mental discipline is important, but certainly the value of such preliminary education depends also on whether the methods pursued in mathematics and science studies are compatible or will blend with those of the pharmacy schools, or whether they are impracticable and useless, if not disadvantageous, for the students of pharmacy.

There is probably no item of the expense budget of a state more closely trimmed than that for educational purposes, and still if the money is properly used it con-

stitutes the best permanent growing investment states can make and no state funds can be more equitably distributed; perhaps "equitably" is not the proper term, for the smallest tax-payer has an equal share and more frequently a larger one than those who pay most. Municipalities wrangle over the salaries paid to teachers, whereas the contention should be for the limit, a desire to advance them year by year as the teachers develop their efficiency, so that the best qualified will seek this important service as life-work.

Let us take a deeper interest, not only in schools of pharmacy but all educational institutions and promotions, for such earnest endeavors stimulate progress, make our lives of greater value to ourselves and others.

E. G. E.

To the Editor of the Journal of the American Pharmaceutical Association:

In the July number of the JOURNAL (page 617) appears an article on the analysis of camphor liniment by L. F. Kebler, and collaborators. The method (heating and polariscopic) in general is the same as that used in this laboratory since 1913. To obtain the best results the liniment should be weighed in a tared flat bottom platinum dish and heated at 110° C. for 90 minutes. Heating in platinum requires just half of the time required for porcelain; 110° C. was found sufficient to volatilize all the camphor, without causing any decomposition of the cottonseed oil, while at 150° C. a slight decomposition of the oil was noted. It is necessary that the oven be ventilated to permit the camphor vapor to escape, or the time required for heating will be lengthened, due to the air in the oven becoming saturated with camphor.

This heating method, together with the determination of the rotation of the liniment in a 200 mm. tube was recommended to the U. S. P. IX Revision Committee but was rejected; and the laborious and impracticable method now official was adopted.

C. O. MILLER, *Asst. Chemist.*

LABORATORY, MARYLAND DEPARTMENT OF HEALTH,
BALTIMORE, MD., July 27, 1917.

PAPERS READ BEFORE THE BRANCHES OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

THE QUALITY OF SOME DRUGS AVAILABLE ON THE MARKET AND PURCHASED ON PRESCRIPTION, WITH METHODS OF ANALYSIS.*

BY L. F. KEBLER with the collaboration of W. O. EMERY, E. C. MERRILL, A. G. MURRAY, E. K. NELSON, S. PALKIN, B. H. ST. JOHN, G. C. SPENCER AND C. D. WRIGHT.

SOAP LINIMENT.

METHODS OF ANALYSIS.

Camphor.—Make a standard soap liniment and determine the optical rotation in a 200 mm. tube at a convenient temperature. Optical rotation about +10.7° sugar scale in a 200 mm. tube at 25° C.

Determine the optical rotation of the sample under consideration at the same temperature. Multiply the rotation of the sample by 4.5 and divide by the rotation of the standard. The result will be grammes of camphor per 100 mils of the sample.

Alcohol.—Introduce 25 mils into a suitable distillation flask, dilute with an equal volume of water and a sufficient amount of a 10% solution of calcium chloride to disintegrate the soap, then make the volume up to about 75 mils with water, mix and distil slowly, so as to avoid loss, about 50 mils into a 200 mil separatory funnel. Saturate the distillate with common salt and shake out with two 15 mil portions of petroleum ether. The remaining portion of the operation is carried out as directed for alcohol under Paregoric.

Summary of Analysis.—Seventy-seven samples were examined, 56, or 73% came within a 20% variation. A number of the samples were woefully deficient in camphor.

Comments.—Soap Liniment contains one percent of oil of rosemary which according to 8th rev. U. S. Pharmacopoeia is optically dextrogyrate up to +15° angular rotation in a 100 mm. tube at 25° C. In estimating camphor this point is of little practical value, excepting in doubtful cases when it should be taken into consideration.

SPIRIT OF CAMPHOR.

METHODS OF ANALYSIS.

Camphor.—Make a standard solution by dissolving 10 Gm. of dry camphor in enough U. S. P. alcohol to make 100 mils.

Determine the optical rotations of the sample and standard in a 200 mm. tube at the same temperature. Multiply the rotation of the sample by 10 and divide by the rotation of the standard. The result expresses the number of grams of camphor in 100 mils of the sample.

Alcohol.—Introduce 25 mils into a separatory funnel, add 50 mils of water, saturate with sodium chloride and extract with three successive portions of petroleum ether. Transfer the hydro-alcoholic salt solution to a distillation flask, wash the petroleum ether with successive portions —20, and 5 mils of saturated salt solution, transfer to distillation flask, and distil until 50 mils of distillate are obtained. Determine the alcohol in the usual way. The percent of alcohol contained in the distillate is one-half that present in the original material.

Summary of Analysis.—Forty-four samples were examined; 19, or 43% came within 10% of the standard; 23, or 52% came within 15%; and 27, or 61% came

* Concluded from p. 621, July issue.

within 20%. The deviations exceeding 20% were in some instances very great. One contained only about one-fourth the amount of camphor called for; one was double strength; and two exceeded even this amount.

Comments.—Spirit of camphor is an extremely simple drug, easily prepared, and it is therefore difficult to explain the divergencies referred to above.

The optical rotation of standard spirits of camphor was found to be +24.7° (sugar scale) in a 200 mm. tube at 25° C.

The rotation of an alcoholic solution of camphor varies somewhat with the concentration of alcohol and camphor. Landolt found the specific rotation of camphor in alcoholic solution to vary from 42.806° in 10% solution to 50.801° in 50% solution, in a 100 mm. tube at 20° C.

Hence the results obtained are strictly comparable only when the percentages of camphor and alcohol are approximately those of the standard solution.

SPIRIT OF NITROUS ETHER.

METHODS OF ANALYSIS.

Ethyl Nitrite.—(*a*) 8th Rev. U. S. P. Method.

(*b*) Introduce 5 Gm. of the sample into a 100 mil flask containing 25 mils of water, add 5 mils of a saturated aqueous solution of potassium chlorate and 5 mils of 10% nitric acid, stopper, mix well and allow to stand about one hour; then add an excess of $\frac{N}{10}$ silver nitrate, mix well and titrate back the excess of silver nitrate with $\frac{N}{10}$ potassium sulphocyanate, using about one mil of a 10% solution of ferric ammonium sulphate as indicator.

$3C_2H_5NO_2 + KClO_3 = KCl + 3C_2H_5NO_3.$

$KCl + AgNO_3 = AgCl + KNO_3.$

$AgNO_3 + KCNS = AgCNS + KNO_3.$

$6KCNS + Fe_2(NH_4)_2(SO_4)_4 = Fe_2(CNS)_6 + (NH_4)_2SO_4 + 3K_2SO_4.$

Each mil of $\frac{N}{10}$ silver nitrate is the equivalent of 0.0225 Gm. of ethyl nitrite.

Alcohol.—Place 25 mils into a suitable sized flask, add 25 mils of a 10% aqueous solution of sodium hydroxide, connect with a reflux condenser and heat for about an hour, cool, add 25 mils of water and submit to distillation; collect 50 mils of the distillate and ascertain the amount of alcohol in the usual way. From the result obtained deduct the amount of alcohol formed in saponifying the ethyl nitrite. Ethyl nitrite yields 61.33% of its weight in alcohol.

Summary of Analysis.—Seventy-nine samples were examined. Of these 45, or 57% failed to come within 20% of the standard; 51, or 64.5% deviated from the standard in excess of 25%. There is certainly room for improvement.

Comments.—The general experience is that there is an excessive amount of low grade spirit of nitrous ether on the market. There is no doubt but that it is one of the drugs most commonly found at variance with the standard. The reasons are undoubtedly manifold. Faulty methods of manufacture are believed to be the chief trouble. Numerous studies have been made on the keeping qualities of this drug.

J. E. Stacy,[1] Farr and Wright,[2] D. Gilmour,[3] G. E. Shaw,[4] L. A. Brown,[5] J.

[1] *Proc. Mass. Pharm. Assoc.*, 54, 1899.

[2] *Trans. Br. Pharm. Conf.*, 447, 1901.

[3] *Pharm. J.*, 66, 54, 1901.

[4] *Ibid.*, 71, 236, 1903.

[5] *Am. Drug.*, 59, 215, 1911.

R. Rippetoe,[6] and F. L. Shannon.[7] The general conclusions arrived at are that spirit of nitrous ether of good quality does not deteriorate materially within a reasonable length of time (six months) if kept in filled, small, amber-colored bottles, in diffused light, at a moderately low temperature. Brown[5] believes that absolute alcohol as a solvent increases stability.

The 8th Dec. U. S. Pharmacopoeial method for determining the percent of ethyl nitrite in this drug is tedious and time consuming. In order to eliminate this feature in our work the initial examinations were made by the potassium chlorate method and, if a sample was found deficient by this process, it was checked by the official method. The chlorate method for estimating nitrites was first described by F. Dietze,[8] and further studied by E. Beuttner,[9] B. Grützner,[10] F. Keppler[11] and C. E. Smith.[12] It is thought by some that the results by the method elaborated for spirit of nitrous ether are a trifle high in some cases due to the possible presence of associated products, such as aldehyde, ethyl acetate, etc. Smith's results indicate that the method under ordinary conditions gives data which are neither too high nor too low. O. Herting[13] described a procedure almost identical to that of Dietze's (1897), fourteen years later (1911). Herting gave 0.0255 Gm. as the $\frac{N}{10}$ silver nitrate equivalent for ethyl nitrite which is incorrect. This incorrect figure, instead of 0.0225 is inadvertently used at times by some in making calculations.

TINCTURE OF IODINE.

METHODS OF ANALYSIS.

Iodine.—The 8th Rev. U. S. P. method.

Potassium Iodide.—(*a*) Five mils of the tincture are pipetted into a deep tared porcelain crucible and heated on the steam bath in a hood until the alcohol and practically all the iodine are volatilized. The crucible is then heated to a dull red for about a minute for the purpose of expelling the remaining traces of free iodine, cooled and weighed. The residue represents potassium iodide if no other non-volatile matter has been added.

(*b*) Dissolve the residue obtained in (*a*) in about 100 mils of water, transfer to a 200 mil beaker and titrate with tenth normal silver nitrate in the usual manner, using from one to two drops of a 10% solution of potassium chromate as indicator.

(*c*) Dissolve residue under (*a*) as directed under (*b*), acidulate with nitric acid, add an excess of $\frac{N}{10}$ silver nitrate to precipitate the iodine as silver iodide; then titrate back the excess of silver nitrate with $\frac{N}{10}$ potassium thiocyanate using about 1 mil of a 10% solution of ferric ammonium sulphate as indicator.

Summary of Analysis.—Sixty-five samples were examined. In the case of iodine, 38, or 58% came within a 10% variation; and 48, or 74% came within a

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[6] *Am. Drug.*, 59, 307, 1911.

[7] *J. Am. Pharm. Assn.*, 2, 83, 1913.

[8] *Süd. Apoth. Ztg.*, 37, 305, 1897.

[9] *Schw. Woc. Pharm. and Chem.*, 35, 545 and 562, 1897.

[10] *Chem. Ztg.*, 21, 308, 1897.

[11] *Süd. Apoth. Ztg.*, 38, 484, 1898; *Abstr. Pharm. Ztg.*, 43, 552, 1898.

[12] *Am. J. Pharm.*, 70, 273, 1898.

[13] *Pharm. Ztg.*, 56, 423, 1911.

15% variation. In the case of potassium iodide 18, or 28% exceeded a 25% limit.

Comments.—It will be noted that a large number of the samples varied materially from the standard either in iodine or potassium iodide content or both. The amount of alcohol present usually came within the working limits.

PRESCRIPTION A.

Six drachms of potassium iodide dissolved in enough water to make two fluid ounces.

10 mils should contain 3.94 Gm. of potassium iodide.

METHODS OF ANALYSIS.

(*a*) This being a simple aqueous solution of potassium iodide the potassium iodide can readily be determined by evaporating the water from a given volume in a weighed dish as follows: Pipette 5 mils of the sample into a suitable tared dish and evaporate on the steam bath; finally render anhydrous by heating in the air bath at 110° C. for fifteen minutes, cool and weigh. The residue is potassium iodide if the prescription was correctly filled.

(*b*) Introduce ten mils, accurately measured, into a 100 mil flask, dilute with distilled water to the mark, remove an aliquot portion, 10 mils, dilute to about 50 mils, acidulate with nitric acid, add an excess of $\frac{N}{10}$ silver nitrate, mix well, and titrate back with $\frac{N}{10}$ potassium sulphocyanate, using about one mil of a 10% solution of ferric ammonium sulphate as indicator. For reactions see potassium iodide under Tincture of Iodine. Each mil of $\frac{N}{10}$ silver nitrate is equivalent to 0.0166 Gm. of potassium iodide.

(*c*) Determine the refractometric readings by immersing the immersion refractometer directly into the solution at a temperature of 25° C. From the reading on the scale the amount of potassium iodide can readily be found by reference to table below.

Refractometer Readings at 25° C.

Potassium Iodide in Aqueous Solution.

Scale readings.	Gms. per 100 mils.	Scale readings.	Gms. per 100 mils.	Scale readings.	Gms. per 100 mils.	Scale readings.	Gms. per 100 mils.	Scale readings.	Gms. per 100 mils.
		31	5.50	51	11.56	71	17.40	91	23.39
12.4	0.0	32	5.80	52	11.76	72	17.70	92	23.69
13	0.2	33	6.10	53	12.05	73	18.00	93	23.99
14	0.5	34	6.35	54	12.35	74	18.30	94	24.29
15	0.8	35	6.70	55	12.65	75	18.60	95	24.59
16	1.1	36	6.95	56	12.95	76	18.90	96	24.89
17	1.4	37	7.25	57	13.20	77	19.20	97	25.10
18	1.7	38	7.55	58	13.50	78	19.50	98	25.45
19	1.95	39	7.85	59	13.80	79	19.80	99	25.75
20	2.3	40	8.15	60	14.10	80	20.10	100	26.00
21	2.57	41	8.45	61	14.40	81	20.40		
22	2.85	42	8.75	62	14.70	82	20.70		
23	3.15	43	9.00	63	15.00	83	21.00		
24	3.45	44	9.4	64	15.30	84	21.29		
25	3.75	45	9.7	65	15.60	85	21.59		
26	4.05	46	10.00	66	15.90	86	21.89		
27	4.30	47	10.30	67	16.20	87	22.19		
28	4.60	48	10.60	68	16.50	88	22.49		
29	4.90	49	10.90	69	16.80	89	22.79		
30	5.20	50	11.16	70	17.10	90	23.09		

Summary of Analysis.—The prescription was filled by 57 different druggists; six, or 10½% failed to come within a 10% limitation; four contained excessive

amounts, varying from 21 to 29%; and two prescriptions were deficient, one 46%, and the other 81%.

Comments.—This being a simple aqueous solution the results obtained by the immersion refractometer are sufficiently accurate for practical purposes. If undue variation is noted, the result should be checked by method (*a*) or (*b*) outlined above, or both.

PRESCRIPTION B.

Acetphenetidin 36 grains, bismuth subnitrate 1 drachm, sodium bicarbonate 2 drachm; mix and make twelve powders.

Each powder should contain 3 grains of acetphenetidin.[14] 5 grains bismuth subnitrate and 10 grains of sodium bicarbonate.

METHOD OF ANALYSIS.

Acetphenetidin.—Place from 1/2 to 1 Gm. of the finely powdered well mixed material on small, counterpoised filters, one within the other, in a funnel, and treat with successive portions of chloroform until all of the acetphenetidin is removed. From 40 to 60 mils are generally sufficient. The solvent must be carefully applied, best from a pipette, not only to the powder directly, but to the sides and upper edges of the filters. Each addition should be allowed to drain before more solvent is used. When exhausted, wash the stem of the funnel with chloroform, collect the filtrate and washings in a tared Jena or non-sol beaker, evaporate carefully at a slightly elevated temperature or in a current of air until the solvent is apparently dissipated, add 5 mils of ether, evaporate, then heat for 15 minutes at about 100° C., cool in a desiccator and weigh.

Comments.—The ingredients of a mixture of this character should not vary to exceed 20% from the written order. On this basis the deviation was excessive in four instances. Attention should also be called to the fact that acetphenetidin was substituted in two instances by acetanilide, by antipyrin in another, and bismuth subcarbonate was substituted for bismuth subnitrate in one case.

PRESCRIPTION C.

Antipyrin, 24 grains, and 120 grains of sodium bicarbonate, to make one dozen powders.

Each powder should contain two grains of antipyrin and ten grains of sodium bicarbonate.

METHODS OF ANALYSIS.

Antipyrin.—Weigh out on a small (5.5 Cm.) filter an amount of the powdered sample equal to or a multiple of the average weight of one powder, wash with successive small portions of 95% alcohol, in quantity about 20 to 30 mils, sufficient at least to extract all the antipyrin present in the mixture. Collect solvent in a 100 mil Erlenmeyer, add 10 mils of an alcoholic solution of mercuric chloride (5 Gm. in 100 mils 95% alcohol), then run in a standard solution of pure iodine (1.351 Gm. resublimed iodine dissolved in 100 mils 95% alcohol, 1 mil of which is either exactly or approximately equivalent to 10 Mg. pure antipyrin) until a faint yellow coloration persists. The number of mils required to bring about this result, multiplied by the value of 1 mil in terms of antipyrin will give the quantity of this substance present in the sample under examination.

Sodium Bicarbonate.—(*a*) This chemical can be estimated by direct titration with a standard acid solution, using methyl red as indicator.

(*b*) The average weight of a powder or a multiple thereof can be incinerated and the residue titrated with normal acid solution, using methyl red as indicator. From the results obtained the amount of sodium bicarbonate can readily be calculated.

[14] Complete analysis of prescriptions was not attempted. Only such ingredients considered necessary to determine whether or not the prescriptions were properly filled, in certain particulars, were estimated.

(*c*) Introduce into a tared platinum dish the average weight of one powder, add sufficient dilute sulphuric acid to decompose the sodium bicarbonate and submit to ignition; this will convert the sodium bicarbonate into sodium sulphate which can be weighed, and from the results the amount of sodium bicarbonate can be readily determined.

Comments.—The prescriptions examined, excepting in two cases, complied closely with the written instructions. In one instance the amount of antipyrin was considerably excessive, and in another the sodium bicarbonate present was only about one-half that called for.

PRESCRIPTION D.

Two drachms of ammonium bromide dissolved in four fluid ounces of cinnamon water.

The four fluid ounces should contain two drachms of ammonium bromide.

Comments.—With one exception the compounding was satisfactory.

PRESCRIPTION E.

Salol and quinine sulphate, of each 30 grains, put into ten capsules.

Each capsule contains 3 grains each of salol and quinine sulphate.

METHODS OF ANALYSIS.

Salol.—Introduce the average weight of one capsule, or multiple thereof into a separatory funnel containing 25 mils of water, render slightly acid and extract with several successive portions of 15 mils of chloroform; introduce the chloroformic extract into a tared beaker and evaporate with a current of warm air. After the solvent has apparently all been dissipated, the beaker should be introduced into a desiccator and allowed to remain for 24 hours before weighing. From the data obtained from the above procedure the amount of salol can readily be ascertained.

Quinine Sulphate.—Render the acid aqueous solution in the separatory funnel alkaline with either sodium bicarbonate or sodium carbonate, extract the liberated quinine with three successive portions of chloroform, transfer the chloroformic extracts to a suitable sized beaker and evaporate at a low temperature, dissolve the quinine residue in alcohol and titrate with $\frac{N}{20}$ sulphuric acid, using methyl red as indicator. From the results so obtained the amount of quinine sulphate can readily be calculated.

Comments.—Results satisfactory.

PRESCRIPTION F.

Antipyrin, 24 grains and 60 grains of sodium salicylate to be mixed and made into a dozen powders.

Each powder should contain 2 grains of antipyrin and 5 grains of sodium salicylate.

METHODS OF ANALYSIS.

Antipyrin.—Introduce the average weight of a powder, or multiple thereof, into a separatory funnel containing about 25 mils of water and a small amount of sodium bicarbonate; extract the resulting solution with four successive portions of 20 mils of chloroform, transfer the chloroformic extracts into a suitable size beaker, evaporate the chloroform in a current of warm air, dissolve the residue in from 30 to 40 mils of alcohol, then add 10 mils of an alcoholic solution of mercuric chloride (5 Gm. in 100 mils of 95% alcohol) and complete by process given under Prescription C for antipyrin.

Sodium Salicylate.—(*a*) Acidulate solution in separatory funnel with dilute sulphuric acid and extract the liberated salicylic acid with several successive portions of chloroform. Transfer the chloroformic extract containing the salicylic acid, into a tared beaker through a dry filter paper. Evaporate the chloroform at a low temperature in a current of air. Finally dry at 80° C., transfer to a desiccator, cool and weigh. From the results obtained the amount of sodium salicylate contained in the prescription can be calculated.

(*b*) Proceed as directed under (*a*) above until chloroform is evaporated. At this stage dissolve the residue in about 10 mils of alcohol, dilute with water to 25 mils and titrate with $\frac{N}{10}$ sodium hydroxide solution, using phenolphthalein as indicator. 1 mil of $\frac{N}{10}$ sodium hydroxide is the equivalent of 0.016 Gm. of sodium salicylate.

(*c*) Ignite a given weight of the material, extract the residue with water and titrate with $\frac{N}{10}$ sulphuric acid, using methyl red as indicator. 1 mil of $\frac{N}{10}$ sulphuric acid is the equivalent of 0.016 Gm. of sodium salicylate.

Comments.—Acetanilide was substituted for antipyrin in two cases.

PRESCRIPTION G.

Phenacetin and salol, each 60 grains, to be mixed and made into one dozen powders.

Each powder should contain 5 grains each of phenacetin and salol.

METHODS OF ANALYSIS.

These methods are given in an article recently published in the *J. Ind. and Eng. Chem.*, 7, 681, 1915, by W. O. Emery, G. C. Spencer and C. C. LeFevre.

Comments.—The compounding was well done.

SUMMARY.

1. The results in this article show that there is considerable room for improvement in the quality of the drugs examined.

2. An examination of the mixtures procured on prescriptions shows that carelessness in compounding obtained in some cases and actual substitution in a few others.

3. A few of the methods of analysis used are new, some an adaptation of well-known procedures and others are the common ones in use.

BUREAU OF CHEMISTRY,
UNITED STATES DEPARTMENT OF AGRICULTURE.

TUBERCULINS.*

BY L. K. DARBAKER.

Barnard and Baron claim that pronounced reactions are more easily obtained with patients in the incipient stages; moderate reactions occur with advanced lesions, and that the absence of a reaction in a clinically advanced patient heralds a speedy death.

The Ophthalmic or Calmette Reaction.—Calmette placed a drop of a 10 percent solution of tuberculin in the eye. This was claimed, in tuberculous patients, to be followed by a more or less severe conjunctivitis, while in the non-tuberculous patients a slight reddening only occurred. The reaction appears in three to ten hours and is highest in six to twelve hours, disappearing in twenty-four to

* Concluded from p. 627, July issue.

thirty-six hours. A secondary test is sometimes made, when the first test is negative, by placing the tuberculin in the uninoculated eye. This test at best was dangerous and was nearly always followed by serious after-effects. It is now seldom used. Patients in advanced stages of the disease frequently did not give the reaction.

Percutaneous or Moro Test.—A piece of ointment about the size of a pea, composed of Koch's "Old Tuberculin" 5 mils and lanolin 5 grammes, is rubbed over an area of about 8 mm. for one-half minute, permitting the ointment to remain on the skin and be absorbed. When the skin in twenty-four to forty-eight hours shows no reaction and no itching, the reaction is said to be "negative;" if within two to ten hours distinct red papules of 1 to 2 mm. in diameter appear, disappearing in a few days, accompanied with itching, the reaction is said to be "Weak Reaction," and if within the first twenty-four hours, 100 or more papules of about 3 mm. in size appear, the surrounding skin becoming red, accompanied with slight itching and lasting unchanged for several days, then gradually fading out, the reaction is said to be "Moderately Strong." If within a few hours after applying the ointment, 100 or more papules of 5 to 8 mm. in size appear on an inflamed background, some papules erupting, and the papules not being confined to the point of inoculation but extending to the immediate surrounding area, accompanied by itching, and in a few days the papules drying up and becoming scaly, all disappearing in two weeks except a brownish pigmentation, the reaction is said to be "Strongly Positive" or "Strong Positive."

The Subcutaneous Test.—"Old Tuberculin" is injected in doses of from 1 to 10 milligrammes. Koch stated that 10 milligrammes could be administered to a healthy patient without producing characteristic reaction symptoms, and used three doses of 1, 5, and 10 milligrammes, injected every three days. A positive reaction gives rise of temperature, pain in head and back, heavy feeling in limbs and general lassitude. The temperature rise is usually in 3 to 16 hours but sometimes only after several days, and returns to normal in 24 to 48 hours. This reaction in many cases is followed by sloughing at the injection site.

Intracutaneous Test.—Consists of injecting "Old Tuberculin" intradermally, which is followed by a nodular area of inflammation in positive cases.

All tuberculin tests exhibit the following reactions to some extent:

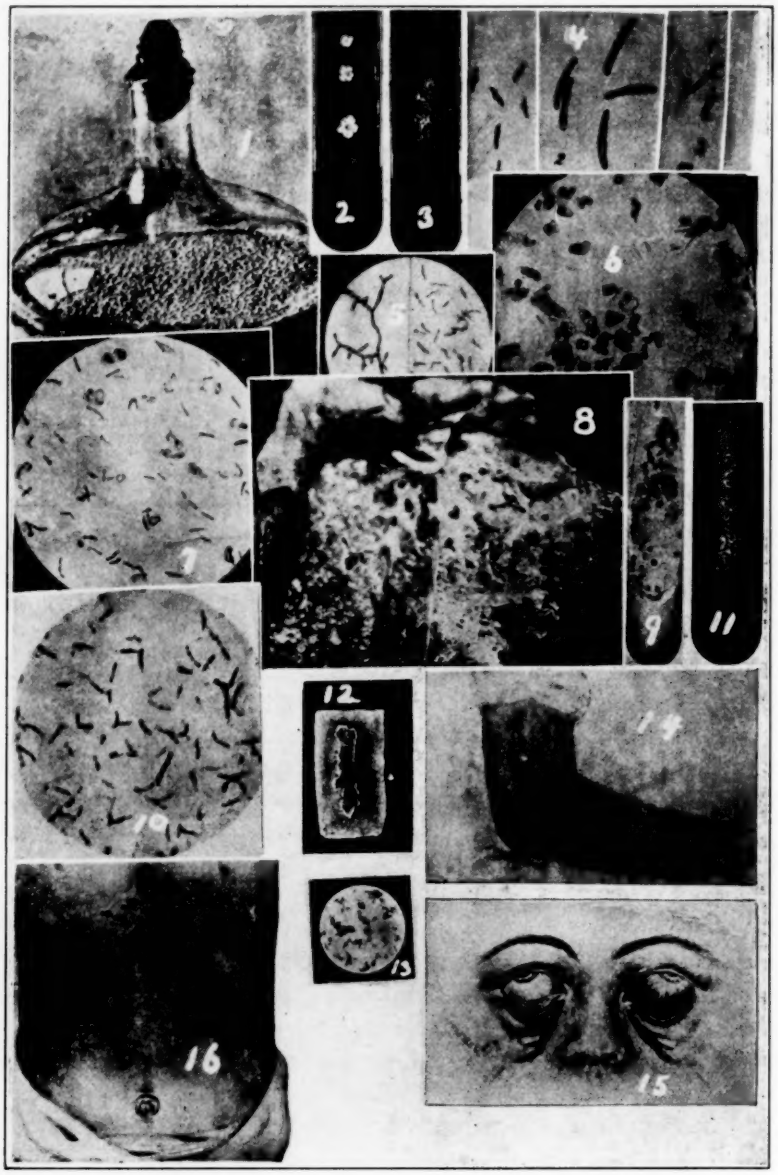
First, general reaction.—Elevation of temperature, headache, malaise.

Second, local reaction.—Increasing local symptoms such as increasing the amount of sputum.

Third, stick reactions.—Inflammation at injection site.

Many tests are better, safer, and convey no danger to the patient, as the Wasserman Modified Tuberculosis Test, Abderhalden Serum Test, and the testing on animals. Dr. Leteve states "All tuberculin tests are dangerous to use on man, although valuable for cattle."

Tuberculin Therapy.—Tuberculin is not suited for patients in a febrile condition, or in whom destruction of tissue is advanced. The curative value of tuberculins depends on the local inflammatory reactions which they cause around the tuberculous foci. Tuberculins, if used, must be administered in such very small doses as to cause the smallest local reactions possible. The treatment begins



1. Broth Culture of the Human Type. Copied from McFarland's Book on Pathogenic Bacteria. 2–3. Human Type Organism. Copied from Saunder's Medical Hand Atlas. 2. 14 days' growth. 3. 40 days' growth. 4. Various Morphological Forms of the Human Type. Copied from McFarland's Pathogenic Bacteria. 5. Copied from Saunder's Medical Hand Atlas. 6. Tubercle Organisms in Urine. From a Tuberculous Bladder. Copied from Klopstock and Kowarsky. 7. Tubercle Organisms in Sputum. 8. Tuberculous Kidney, showing Tubercles. The dark spots indicate the tubercles which have been torn down and excreted. Copied from McFarland's Pathogenic Bacteria. 9–10. Avian Tuberculosis Organism. Copied from More's Principles of Bacteriology. 11–12. Pisciocola Type Organism. Copied from Saunder's Medical Hand Atlas. 11. 30 days' growth. 12. 14 days' growth on potato. 13. The Pisciocola or Fish Type Organism. 14. Von Pirquet Reaction. The middle scarification is the control. Copied from a set of lantern slides on Antitoxins and Vaccination, donated to the writer by Alexander & Company. 15. Calmette Ophthalmic Reaction. Copied from a set of lantern slides on Antitoxins and Vaccinations donated the writer by Alexander & Co. 16. Percutaneous or Moro Test. Copied from a set of lantern slides on Antitoxins and Vaccines, donated the writer by Alexander & Co.

with "B. E.," "B. F." or "T. R.," for pulmonary cases, a dose of 0.000,000,01 (1/100,000,000) Mg.; for glandular or bone infection, a dose of 0.000,000,1 Mg. is given, these doses being gradually increased every week or two for a long period of time, extending over several years.

Much smaller doses must be given in febrile cases. The best results seem to be obtained by giving very small doses at long intervals, and the cure is said to be recognized when the patient has permanently lost the power to react to tuberculin.

Probably the therapeutic value of tuberculins depends upon the formation of antibodies following the injections. These antibodies are produced throughout the whole animal body, while the antibodies produced by the disease are produced only by the tissues directly involved.

The opsonic index has been used as a guide to the dosage, but it is a question as to whether the condition of the patient is a guide to the amount of the injections.

Sahli states "Tuberculin treatment is not an active immunization, pushed to its farthest limits, but rather the essence of the treatment is to stimulate the natural functions of the body."

Voorsanger, in an article in the *Interstate Medical Journal*, sums up the tuberculin question as follows:

"The periods of tuberculin are: First, the first users of tuberculins gave the preparations in excessive doses. This was followed by disastrous results. Second, tuberculin then was generally discarded. Third, he hopes that through careful animal experimentation a true specific for tuberculosis may be found."

Tuberculin over three months' old must not be used. The greater the dilutions of tuberculins, the sooner they become useless.

"We must remember that tuberculins are toxins and not antitoxins, that any product of the tubercle organism, either in whole or in part, is a toxin, and that when administering a toxin into the human body, we wish to obtain an overproduction of antibodies, so as to raise the natural defence already in the body, to stimulate them and to gain as great a production as possible.

"The use of tuberculins made from the bovine type for the treatment of tuberculosis caused by the human type and the use of tuberculins made from the human type organisms when the disease is caused by the bovine type is common. The bovine type organism produces a greater number of antibodies.

"We do not establish an immunity to tuberculosis, but to tuberculins. We are still experimenting; we are not dealing with a specific; we are striving for the extermination of one of the world's greatest scourges. It matters little how this is accomplished. Up to the present day, tuberculins will not cure alone, but with proper care and surroundings, tuberculins may aid and hasten some cures.

SUMMARY.

Cultures of the tubercule organisms are grown in a peptone beef-broth, containing 5 percent glycerin, for 4 weeks, killed by heat, and yield:

I. Bazillen Emulsion, or "B. E." Preserved with 20 percent glycerin. The Bazillen Emulsion upon filtration yields:

II. The filtrate which contains all the broth-soluble constituents.

A. "T. O." or Koch's Original Tuberculin. Prepared by grinding the cultures in a mortar, washing, centrifuging and filtering. Five percent glycerin is added as a preservative.

B. "B. T." or Koch's Old Tuberculin. Prepared by evaporating the cultures, which have been killed by heating at 100° C. for one hour, to 1/10 of the original volume in vacuum, filtering, and preserving the filtrate by adding 50 percent glycerin.

C. "B. F." or Denny's Original Filtrate or Broth Filtrate. Prepared by filtering the cultures through paper and then through porcelain, and preserving the filtrate with 0.4 percent tricresol.

III. The precipitate or residue remaining after filtration, and containing the bacterial organisms:

A. "T. P." or Tuberculin precipitate. The residue remaining after filtration, standardized so that 1 mil contains 5 Mg. solids.

B. "T. P. P." or Purified Tuberculin Precipitate. The residue washed and precipitated with alcohol.

C. "T. R." or Koch's Tuberculin Residuum. Prepared by grinding the dried residue in a ball mill until by microscopical examination shows no whole organisms. The process requires from two to four months. Twenty percent glycerin is added as a preservative. It is then standardized so that 1 mil contains 1 Mg. of solids.

D. "T. C." or Bovine Tuberculin. The residue remaining after the filtration of cultures of the bovine organisms.

The "T. O." is used in the following tuberculin tests:

1. Subcutaneous Test. 0.1 to 10 Mg. injected under the skin.
2. Intracutaneous Test.
3. Cutaneous or Von Pirquet Test. By scarification.
4. Ophthalmic or Calmette's Test. Dropped in eye, 10 percent solutions. ("T. P. P." is also used in this test.)

Also used in suppositories; 1 Mg. or more in each.

The "T. R." is used in the Percutaneous or Moro Ointment Test. Using "T. R." or "B. E." with 5 grammes of lanolin.

All the tuberculin preparations must be tested physiologically and also for sterility.

CRUDE DRUGS OF THE U. S. P. IX, FROM A COMMERCIAL POINT OF VIEW.*

BY S. B. PENICK.

My subject, "Crude Drugs of the U. S. P. IX, from a Commercial Point of View," suggests several considerations and I shall try to present them in the following order: *Their Standards; Their Market Values; Difficulties of Securing Supplies of Foreign Drugs; Difficulties of Securing Supplies of Domestic Drugs.*

Of necessity, I will confine my remarks to Botanical Crude Drugs, since my relation is entirely with this line of business. About most other items of the Pharmacopoeia, I must confess a large amount of ignorance.

Their Standards: The standards that our new Pharmacopoeia has provided for Botanical Drugs, speaking generally, are unquestionably wise, and not unreasonable. We find in the U. S. P. IX a clear and specific standard for most of our important official botanicals. Those for which our chemists have been unable to establish chemical methods of determination of quality, are provided for by other standards which will safe-guard the public against anything that is not true to name and of the best quality.

A WORD ABOUT CHEMICAL STANDARDS OF THE RECENT REVISION.

The drugs containing definite alkaloids, such as Belladonna, Henbane, Hydrastis, Ipecac, Jalap, Jaborandi, Nux Vomica, Colchicum, etc., have standards which can be readily met in the average good quality of the market.

In some of these assayable drugs, it has been interesting to note the changes they have undergone.

Some time ago, because of inability to obtain commercial quantities of belladonna root and leaf, jalap, colchicum and other crude botanicals, meeting the standards of U. S. P. VIII, these requirements were reduced and continue in force to-day. At the present time there is seldom any difficulty in securing most of these drugs well above the present requirements. It is not easy to explain why, at one time, in some cases the alkaloidal content is uniformly low, even in good appearing lots, while at others, perhaps with the lapse of a year or two, the same drugs having no less impurities, will run much higher in alkaloid. Taking, however, the maximum and minimum alkaloidal content of these drugs at different periods, the standards provided are doubtless a good average.

A most valuable addition has been the statement of ash-limits for each item. Information of interest is very rapidly available by this test and with much less likelihood of wide variation in the hands of different persons. It makes for cleaner crude drugs and in a way regulates the character of the foreign matter permissible under present requirements.

Passing from the chemical standards and considering physical qualities, we find wise provisions from a commercial point of view, now made for botanical drugs, the quality of which is judged by their physical condition and appearance. Owing to the fact that botanicals are widely gathered throughout the world by the lowest class of labor, both in pay and intelligence, it has been impossible to obtain a 100 percent standard of quality for scarcely any botanical drug.

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* Read before New York Branch A. Ph. A., May meeting.

When buchu is gathered in the southern portion of Africa, it makes no difference how much pressure is brought upon the natives, they will still supply it with more or less stems, dirt, or other admixtures. When our spigelia root, leptandra root, queen of meadow root, skunk cabbage root, hydrangea root, are gathered, it would require, owing to formation of root branches, a great amount of labor to remove all the adhering dirt. In the collection of seeds which usually grow wild, the peasant labor of Russia is entirely beyond our control, and we cannot prevent the mixing in, to some extent, at least, of other seeds.

It may readily be seen that to purify such goods would more than double the labor cost, while only producing a quality about 10 percent better than now exists in the market. Because of this condition, we find in the new standards a general allowance for stems and foreign matter in many items. A few instances of such percentage allowances are: Buchu leaves, 10; pink root, 10; coriander seed, 5; caraway seed, 3; cloves, 5; senna, 10; uva ursi, 4; fennel seed, 4; and so on. In fixing these standards it is not to be expected that some mistakes would not occur, and we find some drugs which have never been (up to this time) produced commercially, equal to present requirements.

On consulting the item Lobelia—"the dry leaves and flowering tops, without more than 10 percent of stem and foreign matter"—is given as the standard. In the flowering tops there must be some stem, which would possibly be 10 percent of the total, so that no more stem must be present if the drug strictly conforms to requirements. The same conditions exist in the specification for Grindelia. Neither of these drugs will be found on the market within 50 percent of the requirements, and when eventually, both are commercially obtained to meet the standard mentioned, the price now averaging 8 cents per pound, crude, in bale, will be several times this figure, and will be due entirely to the increased cost of labor in producing them. There will also be the risk that there will not be anything like enough produced; this will cause a scarcity which may further increase the price.

The Microscopic Standards which the new Pharmacopoeia presents, of course, make necessary the services of an expert pharmacognosist; but we have no reason to be other than thankful, that such standards are possible, for we all know that microscopical work of experts has been the backbone of the enforcement of the Federal Food and Drugs Act, as far as botanical drugs are concerned.

It is not enough to-day to have a broad general commercial experience in identifying physically, certain products among which may be mentioned, matico, spigelia, belladonna and *viburnum opulus;* it is also necessary, in order to remove all doubt of the genuineness of these and others, that the microscopical work be conducted by experts. A great many mistakes have been made, and are being made to-day, in the identification of drugs because the proper methods are not followed, and it is vitally necessary to uphold the present standards and that expert microscopical work be done on all goods entering this country.

Under physiological standards recommended by the U. S. P. we find classed: Ergot, Aconite, Cannabis, Digitalis, Strophanthus and others. From a commercial viewpoint, we have more or less difficulty, though we are successful, in bringing all necessary drugs up to proper chemical, microscopic and macroscopic standards. But these difficulties are small compared with those encountered in the

maintenance of reliable physiologically tested drugs. I think, however, there will be improvements in the near future which will yield entirely satisfactory results.

It is of general interest to compare Crude Drugs Standards and Conditions of to-day with those of the U. S. P. VIII and prior to the passage of the Federal Food and Drugs Act.

In the foregoing, reference has been made to our present standards, and in comparing them with the U. S. P. VIII, we find very marked differences.

When the Pharmacopoeia was recognized in the law of 1906, the commercial viewpoint of it was not a pleasant one, but it eventually became apparent that the standards it provided would be enforced, making it necessary for many, who had not dusted their Pharmacopoeias for many years, to take them down and begin a new course of commercial work. In the beginning it was thought that unsurmountable difficulties were ahead, in testing assayable drugs, and in procuring supplies to meet the requirements, because of the fact that the U. S. P. VIII made no allowance for any foreign material present in various drugs; products containing even a minute quantity of foreign matter had to be labeled "not U. S. P.," thus damaging the merchandise from a market standpoint. When we compare our present standards with those of the old revision, we can be thankful that the Federal Food and Drugs Act came upon us with the less stringent requirements of U. S. P. VIII to conform to.

Some entertainment may be found in thinking of the conditions surrounding crude drug merchandising which existed prior to the passage of the Federal Food and Drugs Act. It was then merely a question of selling roots and herbs, much as any other commercial business is conducted. You could then buy a given crude drug for 10 cents per pound or 30 cents per pound, as you can to-day purchase a necktie for 25 cents or $2.00.

It is not surprising that spigelia root was then found by inquisitive people to have no anthelmintic properties, that *viburnum opulus* lost some of its reputation. Although impressions to the contrary have prevailed, such practices were by no means intentional with many merchants interested in marketing crude drugs. Conditions then were such, that, commercially, the qualities of to-day could rarely be disposed of, and nothing short of the drastic Federal law, we now enjoy, could have wrought the change. When the law became effective, it looked rather dark for the future of the crude drug business, but, as was foreseen by a few, it has actually proved a very successful measure from a commercial viewpoint, and the standards of to-day stand as a protection to the merchant wishing to conduct his business upon ethical lines.

Market Values: In the Wall Street district since the outbreak of the war, the public has been treated to unprecedented fluctuations. We have seen some industrial stocks, expecially "War-Brides," rise from a few dollars per share to several hundred dollars, and the only other parallel to such advances in commercial affairs has been in the drug and chemical business. Unfortunately the drug and chemical business has not the advantage that the Wall Street stocks have, inasmuch as our stocks must be real and cannot be turned out on paper according to the market demand.

The question of supply and demand is altogether responsible for existing conditions. During the past few months we have seen many botanicals pass from a

few cents per pound in market value to a good many dollars per pound, with the need just as great, though, of course, the consumption curtailed, as when the price was low.

It must be remembered that, contrary to a natural supposition in the case, an item such as pulsatilla herb is in demand not because of superior medicinal value, but merely because some particular pharmaceutical product containing this drug, or some unchangeable physician's demand for this particular herb, and nothing else, causes the rise in price. While pulsatilla herb formerly sold at 40 cents per pound, sales have recently been made in the New York wholesale market at $8.50 per pound. We have seen henbane rise in value from 8 cents, to its present price, which though nominal, is $6.00 per pound.

Aconite root formerly 8 cents per pound, now is 75 cents.
Alkanet root formerly 6 cents per pound, now is $2.00.
Arnica flowers, formerly 8 cents per pound, now are $2.75.
Buckthorn berries formerly 18 cents per pound, now are $2.00.
Cantharides formerly 25 cents per pound, now are $4.50.
Calendula flowers formerly 30 cents, now are $4.50.
Chamomile flowers, formerly 8 cents per pound, now are 60 cents.
Fenugreek seed, formerly 3 cents per pound, now is 13 cents.
Licorice root formerly 4 cents per pound, now is 25 cents.
Senna, T. V., formerly 6 cents per pound, now is 24 cents.
Senna, Alexandria, formerly 12 cents per pound, now is 75 cents.

The mathematics required to calculate these percentages of advance is beyond the capacity of the speaker, but at present a mere 50 or 100 percent advance is of little moment.

The scope of activity of a crude drug establishment and the disposal of the many items coming under the general term of "Botanical Drugs" is not fully realized by many outsiders. We find the veterinary manufacturer an outlet for our aloes, gentian, and other similar items; the pharmaceutical manufacturer, for alkaloidal drugs, and the general line; the toilet goods manufacturer for many; the ice cream dealer for others; the textile manufacturer for others. Literally the butcher, the baker, the candle-stick maker are all customers of the crude drug merchant.

During the past three years, the market conditions have imposed the severest tests upon the ability of the crude drug merchant. It now seems that his problem of a few years ago was a very simple one, as it required only that he be guided by precedents, in arriving at the wisest course for the day's action. Precedent used to be spelled with capital letters, and usually signs of "Business before pleasure," "Do it now," and many other injunctions were all overshadowed by the word "Precedent." To-day the word cannot be found in a business establishment, and the person that ventures to suggest a "precedent" generally finds himself edged away from, and regarded as a freak by his associates.

As we all know, the severance of commercial relations with Germany, at the beginning of the war caused much anxiety and considerable panic, but we have not *yet* realized, perhaps, the full extent of the step. If in the beginning it could have been foreseen that so many of our drugs, both mineral and vegetable, would be cut off, steps could have been taken to replace them by substitutes or parallel drugs,

particularly the items above mentioned. To obtain supplies, we have been compelled to ransack all parts of the world, securing ridiculously small amounts from various countries, where surplus stocks were held. To-day, we are getting very limited quantities from neutral European countries. Little thought was given in the beginning to drugs other than those controlled by Germany, but it is now a fact that the scarcity of ships to bring us raw materials from the Far East, the Mediterranean and even South America, has entered into the difficulty of obtaining supplies and caused absurd market advances. Nux vomica and gamboge from India, and a number of items from Japan and China—our spices from the Far East—have all distressingly advanced in price. To secure merchandise by correspondence, as of old, has practically been abandoned. We must cable and recable to get materials at all.

Domestic Drugs: The difficulties of securing domestic drugs presents wholly a different aspect, as this line has been full of competition. A bare living was made by the natives of the mountains of Western North Carolina, in gathering our supplies of wild cherry, sassafras, black haw and about 150 other crude drug articles. Competition reducing the price, usually helped in normal times to secure these herbs. Now that we have greatly increased demands on labor for farm products, barks for tanneries, wood for paper pulp and many other industries which provide the same class of labor with remunerative work, we have great trouble in securing domestic drugs. The state of affairs is due almost entirely to labor scarcity. We have seen this winter, lady slipper root advance more than 200 percent; Canada snake root about 300 percent; spikenard, squaw vine and many others have advanced. There is little prospect of the present season's collection relieving the situation, and American drugs must take their place in the line of march to higher prices.

I am inclined to think that the crude drugs of the U. S. P. IX, on account of the higher plane they now occupy and because of the standards maintained for them, are likely to increase in consumption, and in usefulness. They will be real factors in the mitigation of sickness and disease.

LABORATORY, S. B. PENICK & CO.

GELATIN AS A NUTRIENT.

It is generally supposed that gelatin is incapable of building tissues, and that in no way can it be regarded as a true substitute for proteins. But recent biochemical researches show that under certain conditions gelatin can replace the proteins for the purposes of nutrition. Evidence has been adduced that the addition of the amino-acid tryptophane alone to the hydrolysis products obtained from pure gelatin made these efficient in maintaining the nutrition of animals. The addition of tyrosine does not give the same decided effect as tryptophane. In the case of unhydrolysed gelatin, however, it was badly digested and absorbed, and this explains the failure to obtain good results upon the addition of the missing amino-acids in previous experiments. With the addition of tryptophane to hydrolysed gelatin in the cases of four rats experimented upon, two were not only able to maintain their weight but also exhibited some growth, and their general condition remained satisfactory.—G. Totani (*Bio-Chem. Journ.*, October 1916, through *Pharmaceutical Journal*).

CONTRIBUTED AND SELECTED

BATHING ALCOHOL CANNOT BE SOLD WITHOUT INTERNAL REVENUE TAX.

BY OTTO RAUBENHEIMER.

With great interest did I read the article of my friend Burge from Tennessee in the June number of the JOURNAL, namely, "Selling Alcohol without Internal Revenue Special Tax." I was particularly well pleased with the clear statement at the foot of page 539 and at the top of page 540:

"Pharmacists may carry wines and distilled spirits in stock for the manufacture of U. S. P., N. F., and other preparations, and for compounding *bona fide* prescriptions, without the 'special tax,' provided sufficient drugs are used in the alcohol before its sale to render it unfit for use as a beverage. But they cannot sell spirituous liquors or wines not so compounded, even on a physician's prescription, and for purely medical purposes, without the *special revenue license.*"

However, I cannot agree with my friend Burge in the following paragraph and the entire balance of his paper, quite especially as to the statement:

"In order to exempt the pharmacist from this special tax, the Internal Revenue Department has approved of the following combinations, by which the alcohol is so denatured that it may be used for bathing and general antiseptic purposes, the intention being that the prescription shall specify the nature and amounts of the ingredients desired in the compound." Then follow 17 formulas for bathing or rubbing alcohol.

This entire matter came before the Committee on National Formulary of the A. Ph. A., together with the recommendation to adopt one of these formulas for "Bathing or Rubbing Alcohol" in the new (4th) edition of the National Formulary. However, when the Committee got in touch with the Internal Revenue Department at Washington, it learned that *these formulas could not be used by the pharmacist for the preparation of a Bathing Alcohol without an Excise License.* Why then were these formulas published? The answer is, for the use of hospitals and other institutions which obtain their alcohol *free of tax, so as to render the alcohol unfit for internal use.*

This matter was thoroughly threshed out and the National Formulary Committee, as early as October 1915, at the Philadelphia meeting, definitely decided *not to adopt a formula for "Bathing Alcohol" in the new edition of the N. F.*

Inasmuch as this fact does not seem to be generally known—quite especially as the Denver Branch even adopted one of the formulas in April 1916—I consider it my duty to call the attention of my brother pharmacists to this important matter. Remember that by selling bathing alcohol, even when denatured by one of the formulas of the Internal Revenue Office, the pharmacist must possess a Federal Alcohol License and, furthermore, in most states also a State Revenue License, or as it is named, to the disgrace of pharmacy, a Retail Liquor License.

CONCERNING PROPOSED COMPULSORY HEALTH INSURANCE LEGISLATION.*

BY J. H. BEAL.

The professed objects of compulsory health insurance must command the cordial sympathy of every right-minded citizen. Every one will readily grant that the loss of wages due to illness, and the cost of medical treatment either of himself or of members of his family constitute a grievous burden upon the poorly paid wage earner, and that the alleviation of such burden is a proper subject for state legislation.

It does not follow, however, that the first remedy suggested is the proper one, or that we should accept any proposed remedy without careful scrutiny of its provisions, and without thorough consideration of its probable effects both upon the classes sought to be benefited and upon the state and society at large.

The so-called "model" or "standard bill" for Compulsory Health Insurance proposed by the *American Association for Labor Legislation* is a lengthy document, consisting in all of 59 sections, many of them containing provisions which interlock with the provisions of various other sections, so that only by careful and critical study is it possible to become acquainted with the purport of the measure as a whole or to form any intelligent judgment of its probable effects upon the persons to be benefited or upon the persons who are to bear the burdens imposed.

The nature of compulsory health insurance.—As set forth in the standard bill, compulsory health insurance is the insurance by act of law of certain classes of wage earners and their families against sickness—including maternity—and the payment of certain cash and death benefits.

It is "compulsory" because all of the workers to whom it applies are to be insured by act of law without the exercise of option on the part of the individual insured.

Who are to be compulsorily insured.—Compulsory insurance is to apply to "every worker at manual labor," no matter what his wage income may be—and to every other employee whose wage compensation does not exceed $100.00 per month.

The only persons to be exempt under the law are employees of the United States Government and also such state and municipal employees as are otherwise insured "through legally authorized means," *i. e.*, those who are insured under some other form of law. (Sec. 2.)

When the benefits are to accrue.—The benefits are to apply to every case of sickness of employees, or members of their families, and to accident or death not covered by workmen's compensation acts. (Sec. 6.)

What the benefits are to consist of.—The minimum benefits are to consist of—

(1) All necessary medical, surgical and nursing attendance for the employee and dependent members of his family.

(2) All medical and surgical supplies to the extent of $50 in any one year.

(3) For female employees or the wives or widows of employees a maternity benefit for six months of the year preceding confinement.

(4) A cash payment to the employee during sickness, equal to two-thirds of his weekly wage, for 26 weeks.

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* An address before the Illinois State Pharmaceutical Association, June 20, 1917.

(5) In place of home treatment, the sick employee may be given treatment in a hospital, in which case his family is to receive one-third of his weekly wage.

(6) In case of death of the employee or of a dependent member of his family, a funeral benefit of $50. (Sec. 7.)

Additional benefits may be paid under certain conditions. (Sec. 20.)

How the expense is to be met.—The expense of compulsory health insurance is to be contributed jointly by employers, employees and the state. The employer and employee are each to contribute 40 percent of the cost, and the state 20 percent. The state is also to pay the salaries and expenses of the State Social Insurance Commission and its employees, and also various other expenses of administration.

If the earnings of the employee are below $9 a week, the contribution of the employer is increased proportionately and that of the employee correspondingly decreased. If the weekly wage is $5, or less, the employee is relieved of all contribution.

The limit of the amount of money which may be spent.—According to the standard bill there is no limit on the amount of money which may be collected and spent. It must be *sufficient* to discharge the obligations created by the law. (Sec. 23.)

How the money is to be collected and paid.—The employer must pay into the fund at least monthly the total contribution due from him and his employees, and must notify his employees of the amount paid on their behalf. (Sec. 33.) The state contribution is to be paid from the state treasury.

The machinery of administration.—The machinery of administration is partly local and partly state. At the head of the system there is to be a "Social Insurance Commission," appointed by the Governor and paid by the state, having general charge of the administration of the law and supervision over the local societies. (Sec. 43.)

The Social Insurance Commission is to be advised by a "Social Insurance Council" (Sec. 52) and by a "Medical Advisory Board," chosen by the state medical societies. (Sec. 56.)

The local machinery is to consist of local or trade societies known as "Funds" or "Carriers," each of which is to be controlled by a "Committee of the Fund" and a "Board of Directors."

Creation of the local societies or funds.—The state is to be divided into districts containing not less than 5000 persons subject to compulsory insurance, in each of which there is to be one or more local or trade funds which are the direct carriers of the insurance in such district. (Sec. 25.)

By act of the law every person in the district subject to compulsory insurance and every employer thereof is made a member of these local or trade funds. (Sec. 34.)

The first step in the organization of a fund is the election of a "Committee of the Fund" of not less than 20 nor more than 100 members, who are to be elected jointly by the votes of the employee and employer members. (Secs. 29–30.)

The Committee of the Fund in turn is to elect a Board of Directors of not less than 8 nor more than 18 members, which is to direct the administration of the Fund. Members of the Board are to receive $5.00 per day while attending meetings. (Sec. 31.)

The above is a very imperfect review of some of the principal provisions of the bill. Other sections will be referred to subsequently.

CHARACTER OF THE BILL IN GENERAL.

Apparent discrimination against certain classes of workers.—A peculiar feature of the bill is the apparent discrimination against certain varieties of labor in favor of others.

Section 3 provides, among other things, that compulsory insurance shall apply to every person "employed at manual labor," and to every other employee whose remuneration does not exceed $100 per month.

That is, a railroad engineer or high grade mechanic earning perhaps $2,000 to $2,500 per year would be entitled to receive free medical, surgical and nursing attendance and supplies for himself and family, and two-thirds of his weekly wages while ill, while an employee at any other kind of labor who might receive a few dollars in excess of $100 per month would not be entitled to any of these benefits, although as a citizen and taxpayer he would contribute to the maintenance of the health insurance of the more highly paid manual worker.

The reason for this discrimination between employees at manual labor and other employees is not clear. The only information given in the pamphlet accompanying the bill issued by the *American Association for Labor Legislation* is the statement that "German and English precedents are followed by including under compulsory insurance all manual workers, whatever their earnings, and in limiting compulsory insurance for other employees, mostly clerks and foremen, to persons earning less than $1,200 a year."

According to all accounts there are but few manual laborers in Germany and Great Britain who receive wages comparable to those paid to specialized mechanical laborers in the U. S., and if this be true something more than a bare quotation of European precedents would seem to be necessary to establish the justice of what, at least on its face, appears to be a gravely unfair discrimination in favor of one class of wage earners as against all others.

Indefiniteness of certain provisions of the standard bill.—Advocates of the standard bill have had much to say concerning the simplicity of the language employed, and of the absence of involved and obscure phraseology, but such praise must be accepted with some qualification. At least a part of its apparent simplicity seems to have been gained by the avoidance of problems troublesome of solution, or by the use of general terms for the designation of functions which would show themselves to be incapable of practical application if they had been described in detail.

For example, Section 4 provides that "Special regulations shall be made by the Social Insurance Commission for the insurance of home workers and casual employees, or for their exemption from compulsory insurance."

The insurance of the casual worker, usually one who works at odd jobs or irregularly, has not been satisfactorily accomplished by the German and British social insurance schemes, because there is no regular employer to contribute the employer's proportion or to be responsible for the contribution due from the employee.

The use of the word "shall" in Section 4 would indicate that such insurance is to be imperative, but this conclusion is destroyed by the qualification that the Commission may exempt them from compulsory insurance. In other words, these workers may be either compulsorily insured or exempted from insurance as the Social Insurance Commission pleases.

Another example of simplicity obtained by the avoidance of embarrassing details is found in the provisions for the insurance of self employed persons (*i. e.*, the huckster, small shop-keeper, etc.) for whom it is simply provided that they "may insure themselves voluntarily in the local or trade funds of the locality in which they live, or of the trade at which they are employed, subject to the conditions of this act." This language seems to indicate that such persons may obtain insurance on the same terms as other wage earners, but on examination of another section (Sec. 35) we find that the by-laws of a fund may refuse insurance to any person "who has not passed a satisfactory medical examination," and that an application for admission to voluntary insurance "shall be subject to the same conditions as an application for ordinary life insurance."

Under compulsory health insurance it is not to be expected that employers will hire, or will continue the employment of persons whose age or physical condition indicates that they will soon be in need of relief. Such persons will thus become either casual workers who may be exempted from insurance by the Commission, or self-employed persons to whom voluntary insurance may be denied because of their inability to pass a medical examination. In other words, the insurance of these two classes of workers, the most necessitous of all wage earners is, so far as this bill is concerned, only a hollow pretense.

If the framers of the standard bill knew of any effective and practicable method of providing health insurance for casual workers and self-employed persons they should have inserted sections showing how this might be done, or at least should have furnished us with a sample of the special regulations by which the Insurance Commission can effectively deal with a subject which so far has not been satisfactorily handled in the countries where health insurance laws are in force.

No restriction upon the character of the illness compensated for.—It will be observed that there is no restriction upon the character of the illness, or of the cause from which it resulted, so far as entitlement to benefits is concerned. The man whose damaged health is due to his own negligence or fault, the sufferer from vicious habits or from gross neglect of the rules of health, and the victim of venereal disease are equally entitled to medical benefits with the man whose illness grows directly out of the nature of his employment or is due to some reason or misfortune for which he is in no wise responsible.

The healthy employee of careful habits, the employer and the state are all to be called upon to soften the way of the transgressor and to contribute not only to the medical care and treatment of the vicious and undeserving, but also to pay them a cash compensation equal to two-thirds of their wages during their enforced vacations.

The medical provisions of the bill.—The provisions regulating medical, surgical and nursing services are fairly elaborate, comprising about one-eighth of the entire text of the bill, and are as follows:

"Section 10. MEDICAL SERVICE. The carriers, subject to the approval of the Commission, shall make arrangements for medical, surgical and nursing aid by legally qualified physicians and surgeons, and by nurses or through institutions or associations of physicians, surgeons and nurses. Provision for medical aid shall be made by the carriers by means of either:

(1) A panel of physicians to which all legally qualified physicians shall have the right to belong, and from among whom the patients shall have free choice of physician, subject to the physician's right to refuse patients on grounds specified in regulations

made under this act; provided, however, that no physician on the panel shall have on his list of insured patients more than 500 insured families nor more than 1000 insured individuals;

(2) Salaried physicians in the employ of the carriers, among which physicians the insured persons shall have reasonable free choice;

(3) District medical officers, engaged for the treatment of insured persons in prescribed areas;

(4) Combination of above methods."

"Section 11. MEDICAL OFFICERS. Each carrier shall employ medical officers to examine patients who claim cash benefit, to provide a certificate of disability, and to supervise the character of the medical service in the interests of insured patients, physicians, and carriers."

"Section 13. HOSPITAL TREATMENT. Hospital or sanatorium treatment and maintenance shall be furnished, upon the approval of the medical officer of the carrier, instead of all other benefits (except as provided in Section 16), with the consent of the insured member, or that of his family when it is not practicable to obtain his consent. The carrier may demand that such treatment and maintenance be accepted when required by the contagious nature of the disease, or when in the opinion of its medical officer such hospital treatment is imperative for the proper treatment of the disease or for the proper control of the patient. Cash benefit may be discontinued during refusal to submit to hospital treatment. Hospital treatment shall be furnished for the same period as cash benefit. This benefit may be provided in those hospitals with which the funds and societies have made satisfactory financial arrangements which have met the approval of the Social Insurance Commissioners, or in hospitals erected and maintained by the funds and societies with the approval of the Commission."

From this section it is evident that if the patient refuses to accept hospital treatment the payment of cash benefit may be discontinued, which should prove effective in compelling adherents of Christian Science, osteopathy or other drugless cults to accept the treatment proposed by the regular medical officers.

"Section 14. ARBITRATION COMMITTEE. All disputes between the insured and physicians, or between funds and physicians concerning medical benefits shall be referred to special committees composed of representatives of the interests concerned with an impartial chairman appointed by the Commission, with an appeal to the Commission."

"Section 56. MEDICAL ADVISORY BOARD. The state medical societies shall choose a medical advisory board which shall be consulted on medical matters."

The number of members to constitute the medical advisory board is not specified, nor is there any mention of the term of office.

There is no definition provided for determining what shall be considered a state medical society within the meaning of the act, nor is there any statement of the manner in which the election shall be held.

This suggests the query, whether a society of osteopathic practitioners would be considered a state medical society, and also whether the medical societies are to hold joint meetings for the selection of members of the medical advisory board, or are to act separately.

"Section 58. MEDICAL DISPUTES. All disputes regarding medical benefits which have been appealed to the Commission shall be referred by the Commission to the medical advisory board, which shall report to the Commission, and the Commission shall not decide any such dispute until after a report has been made by the board."

Since all disputes affecting the interests of physicians must first be tried by an arbitration committee on which the physician is represented, and since all appeals from the decision of an arbitration committee must be passed upon by the Medical Advisory Board before the Insurance Commission can decide the matter in dispute, it is evident that the physician's side of the controversy will have ample opportunity of presentation before it is decided against him.

To an outsider it would appear that the interests of the physician are abundantly cared for, especially those who might be fortunate enough to obtain employment under the provisions of the law.

It is stated on good authority that in Great Britain one-fifth of the doctors are in many towns treating one-half of the insured population. German experience is quite similar. In both countries a few physicians enjoy a majority of the insurance practice.

We cannot help but believe that a similar result would follow the general adoption of compulsory health insurance laws in the United States, in spite of all efforts to prevent it. Employment under a health insurance law is public employment, and public employment is only another name for political employment. In every age and in every country political preferment has most frequently come to the best politicians, and I know of nothing in our political history to indicate that the case would be otherwise in the United States.

No basis or rate for the physician's compensation.—It will be observed that there is nothing in the bill to indicate the rate or basis of compensation for medical and surgical services.

A physician friendly to the measure has explained to the writer that this omission was intentional, because it was feared that if a proper rate of compensation for medical services was included it would increase the opposition to the bill's enactment, and that after the bill becomes a law the physician's remuneration can be made satisfactory through the joint action of the arbitration committee and of the state Medical Advisory Board, both of which must pass on all disputes between physicians and the funds before they can be acted upon by the Insurance Commission.

If this be the true reason for the omission, then it can be regarded only as an unworthy subterfuge, and one which is very likely to defeat its own purpose.

All fair-minded men will agree that if medical service is taken by the state it should be properly compensated for, but certainly the taxpayers are entitled to all possible information as to the probable cost of the legislation which they are asked to adopt.

If the bill is put through without the giving of such information and the expense proves greater than was expected, the taxpayers will have the right to feel that they have been tricked, and will demand amendments which will probably be less favorable to the medical servitors than if a fair basis for medical compensation had been plainly stated in the bill in the first place.

The relation of the pharmacist to health insurance.—Provisions for the recognition of the pharmacist's right to existence are conspicuous by their absence from the standard bill. The words pharmacy and pharmacist do not appear in any of its provisions, and the only reference to pharmaceutical interests is in Section 12, which provides that "Insured persons shall be supplied with all necessary medicines, surgical supplies, dressings, eye-glasses, trusses, crutches, and similar appliances prescribed by the physician, not to exceed $50 cost in any one year;" but no mention is made of the manner in which these supplies are to be obtained or furnished.

Section 13 provides that hospital or sanatorium treatment shall be given whenever in the opinion of the medical officer such treatment is necessary, and also that hospital treatment may be given in existing institutions or in hospitals

erected and maintained by the funds and societies with the approval of the Commissioner.

It does not require any great gift of prescience to realize that persons receiving hospital treatment will receive their medical supplies from the hospital dispensary, and that in all human probability patients receiving home treatment will also obtain their supplies from the same source.

A London correspondent to an American medical publication (*J. A. M. A.*, Feb. 5, 1915, p. 441) has the following to say of the operation of the act in Great Britain as it affects the pharmacist:

"Considerable dissatisfaction exists among pharmacists as to the working of the insurance act. It may be remembered that a capitation fee of half a dollar per annum was allowed by the act for the cost of medicines. The pharmacists claim that this amount is quite sufficient if the act is worked properly and physicians exercise due economy. Unfortunately some do not, and if the amount of money allotted in a particular district on this basis is not sufficient to pay for the medicines, the pharmacists have to submit to a reduction of their bills. These bills are calculated according to a prescribed system—so much for the cost of the drugs according to the market prices, so much for establishment charges (something under 2 cents per prescription) and a dispensing fee (4 cents per prescription). Naturally the pharmacists object to having to pay the penalty of extravagance committed by physicians.* * * * There is a deficiency in the drug fund of about $35,000 for the year. But while it is easy to bring home cases of gross extravagance, it is obvious that a good deal of extravagance may be practiced without the possibility of a proof. Another form of extravagance more difficult to detect is due to complaisance in ordering medicine for patients over long periods, after it has become unnecessary, or ordering it for patients who never required it at all. In the perfunctory work which all forms of contract practice encourage, there is a strong tendency simply to write prescriptions after the most hasty examination, or, indeed, simply on the basis of the patient's complaints. As has been pointed out in previous letters, the insurance act in many ways provides an object lesson in the evils of socialism."

How can the just rights of pharmacy be guarded?—If compulsory health insurance is to become a fact in this country, the least that pharmacists can demand is that their just interests shall be as fairly treated as those of the physician. That they will not receive such treatment is tolerably certain unless proper provisions for pharmaceutical service are made a part of the law. So far as practicable, therefore, the provisions for pharmaceutical services should parallel the provisions for medical services. That is, there should be a provision for Panels of Registered Pharmacists to furnish medical supplies and medicines, a provision for representation on Arbitration Committees to pass on disputes between pharmacists and the funds, a provision for a State Pharmaceutical Advisory Board, chosen by the State Pharmaceutical Association, to advise the Social Insurance Commisssion on pharmaceutical matters, and to pass upon appeals from the decisions of arbitration committees on disputes regarding pharmaceutical services.

If some such provisions are not inserted, and if the present medical provisions remain unchanged, it will not be many years after the general adoption of health insurance laws until the woodbine will be twining above the last resting place of dispensing pharmacy.

Effect of compulsory health insurance upon voluntary health insurance.—In addition to the various private corporations which write sickness and burial insurance for profit, there are in the United States numerous fraternal societies, labor organizations, etc., which provide such benefits for their members, and "establishment societies," as that maintained by the Pennsylvania railroad, which provides similar benefits for the employees of particular establishments.

This system of voluntary efforts to provide against the contingencies of sickness and death by wage earners is constantly growing, and if not forcibly interfered with by law is likely to reach a very much greater development.

Judging by the experience in Great Britain, the general adoption of a system of Compulsory Health Insurance will have serious results upon all such voluntary efforts at self-help.

Certain sections of the standard bill (Secs. 35 to 40) purport to provide for voluntary insurance by labor unions, fraternal societies, establishment societies, and the like, provided such societies meet certain specified requirements, and provided also that their "operation will not, in the opinion of the Commission, endanger the existence of any local or trade fund."

The inference is plain. If any of the competing voluntary societies are unable to meet the specified requirements, they will go out of business automatically. If they are able to meet the requirements and continue successfully in business and thereby attract those who would otherwise be insured in the local or trade funds it will only be necessary for the Commission to rule that the voluntary society endangers the existence of the local or trade fund, and their competition will be promptly extinguished.

The elimination of these voluntary societies will also be aided by the provision (Sec. 39) that the employer of those voluntarily insured shall pay to the state fund the same contribution he would have been required to pay if his employees had been members of the compulsory insurance fund. If the employer contributes to a voluntary society or to an establishment fund he will thus have to pay double, and consequently, his interests will lie in the discouraging of all attempts at self-insurance on the part of his employees.

Effect of compulsory health insurance on sickness prevention.—One of the arguments upon which the advocates of compulsory health insurance legislation place great stress is that it will have a great effect in improving general health conditions of the community and in decreasing the morbidity and invalidity rates of the industrial classes. Thus, in the pamphlet setting forth the "Standard Bill" we find the following:

"Unfortunately, although much of it is preventable, there are no signs that sickness in America is diminishing. Instead, the deaths in middle life, due to degenerative diseases, have increased during the last twenty-three years in the United States by 40 percent, whereas during the same period, Prussia, under compulsory health insurance, has markedly improved its national vitality and increased the average span of life. * * * *

"Why should not the general public, through the state, contribute to what has proved in other countries the most powerful agency for sickness prevention, Health Insurance?"

These claims do not seem to be borne out by the evidence of the improvement in the morbidity and mortality rates in Germany and Great Britain as compared with similar periods in the United States.

In an address before the National Civic Federation in New York City (*Compulsory Health Insurance*, pp. 27–28), Mr. Frederic L. Hoffman, statistician for the Prudential Life Insurance Co., made the following statement:

"In so far as the statistical evidence can be relied upon the anticipated results of social insurance in its relation to the health of the adult population have been far from realized. From the introduction of social insurance in the city of Berlin to the present time the mortality rate at ages over ten years has practically remained unchanged. The reduction in the general death

rate has, almost exclusively, affected the population under ten, and chiefly the children under five years. * * * * Considered by quinquennial periods, there has practically been no perceptible change in the rate during the long period since social insurance has been in operation, including insurance against invalidity. Evidence of this nature can neither be contradicted nor gainsaid. * * * *

"There has been a greater reduction in the tuberculosis death rate in this country than in Germany, regardless of the enormous governmental machinery serving social insurance purposes."

In support of these statements Mr. Hoffman quotes figures (*ibid.* p. 30), showing that in 13 years the percentage decrease in the tuberculosis death rate in Prussia was 51 percent, while in the same period the percentage decrease in the tuberculosis death rate in Massachusetts was 57 percent. He further states that the death rate from tuberculosis in England has increased since 1912 under compulsory insurance, and this fact is borne out by the official reports.

In another place (*J. A. M. A.*, Feb. 10, 1917, p. 480), Mr. Hoffman makes the following comparison between health improvement in Europe and the United States through corresponding periods:

"The mortality from pulmonary tuberculosis in the city of New York decreased * * * * during the first five years of the twenty-year period * * * * 44.1 percent. The corresponding decrease in the pulmonary tuberculosis death rate of Berlin was * * * * 36.7 percent. The actual as well as the relative decrease in the pulmonary tuberculosis death rate was therefore more pronounced in the city of New York *without* compulsory health insurance, than in the city of Berlin, where practically the entire wage-earning population is subject not only to the provisions of the compulsory health insurance law, but also to the even more drastic provisions of a compulsory invalidity insurance law. * * * *

"The mortality from typhoid fever, which is perhaps the most sensitive index of sanitary progress, decreased in New York City from 2.5 per 10,000 to 1.1 * * * per 10,000, equivalent to 56 percent. The corresponding decrease in the typhoid fever death rate of the city of Berlin was from 1.4 per 10,000 to 0.3, or 1.1 per 10,000, equivalent to 78.6 percent. The actual reduction in the typhoid fever death rate of the city of New York was therefore greater than the corresponding reduction in the typhoid fever death rate for Berlin. * * * *

"However, it requires to be considered that the city of New York has had to assimilate an enormous immigrant population, aside from the fact that large numbers annually go on vacation and contract typhoid fever in unsanitary resorts, etc. It is a safe assumption that a large proportion of deaths from typhoid fever in the city of New York at the present time are cases contracted outside of the city.

"An equally sensitive index of effective sanitary progress and control is the mortality from diphtheria and croup. The death rate from these diseases in the city of New York decreased * * * * 75.9 percent. The corresponding decrease in the death rate of Berlin was * * * * 60.2 percent. The mortality from diphtheria and croup is now almost exactly the same in the two cities, and it may safely be asserted that the reduction has been achieved in both cities without any reference whatever to compulsory health insurance."

From the report of a Commission appointed to investigate the results of Compulsory Health Insurance in Great Britain (*J. A. M. A.*, April 7, 1917, p. 1054), the following is abstracted:

"(*c*) The tuberculosis scheme cannot be regarded as a success; in all probability much better results would be obtained were the existing system of over-lapping control brought to an end and the whole responsibility vested in one public health authority. (*d*) It is impossible to expect fully satisfactory results from any of the health services unless and until housing conditions, both urban and rural, are improved. * * * *

"The results of the act as regards sanatorium benefit are looked on as disappointing. The problem was largely miscalculated, and the results fall far short of the expectations raised. Better access to early cases and isolation of late and infectious cases are regarded as essential. Most of

the evidence was in favor of handing over the whole treatment of tuberculosis to the public health authorities. Unless housing conditions are substantially improved, which means a large expenditure, 'it is impossible to expect really satisfactory results from any national health insurance scheme.' "

Compare the last quotation with a statement by a prominent labor leader before the National Civic Federation (*Compulsory Health Insurance*, p. 15), as to the improvement in health and longevity of cigar makers and printers in the United States effected through the betterment of sanitary and working conditions:

"What have the trade unions such as cigarmakers and the typographical accomplished in extending the life of their members by improving working conditions? I know of no more striking results than that has been obtained by these two organizations. For example, the cigarmakers: In 1888, 51 percent of their membership were tubercular; in 1911, 21 percent. In 1888 the average age at death of their members in the cigarmakers was 31 years, 4 months and 10 days; in 1911, the average age of their membership at death was 50 years, one month and 10 days. Take the printers: In 1900 the average age at death was 41 years and 3 months; in 1915 the average age at death was 50 years and 4 months—all brought about by improved sanitary and better working conditions, and better hours."

The expense of compulsory health insurance.—Even a casual study of the standard health insurance bill serves to show that the cost of operation will be something enormous when compared to the expenditures which have hitherto been made for public health purposes. Closer study confirms this first impression and although no one can yet calculate the amount it will cost the public purse, there is reason to believe that the state's share alone will be as great, if not greater than its entire expenditure, in normal times, for all the ordinary purposes of civil government.

In the first place, in addition to its normal contribution of 20 percent for benefits, the state is chargeable with the general expenses of administration. The Insurance Commission is authorized to establish as many branch offices, aud to employ as many officers, employees and other assistants as may be necessary, all of whose salaries, traveling and other expenses must be paid from the state treasury. In addition to the various commissions, councils, advisory boards, boards of arbitration, and medical officers mentioned in the standard bill there will necessarily be an army of pay-roll inspectors, cashiers, auditors, bookkeepers, claims investigators, work inspectors, branch office managers, collectors, adjusters, stenographers, clerks, etc., etc.

And this is not all; the state itself, either directly or through its subdivisions, is the employer of an army of servants of various kinds, all of whom would come under the operation of the law, and on whose behalf the state would be required to pay the employer's contribution of 40 percent in addition to its normal contribution of 20 percent.

Some estimates of the costs of these various activities have been prepared by William Gale Curtis, an insurance expert of Detroit, Michigan.

His estimates for the State of Illinois, using the state tax of 1915 as a basis, are as follows:

Number of wage earners subject to the law	2,400,000
Number of state employees for which the state would pay 40 percent as employer	15,000

The State Contribution of 20 percent would be	$11,520,000
Whole cost to the state, including expense of administration	12,500,000
Whole cost to employers, wage earners and the state	57,600,000
Of this enormous total, the employers would pay	35,500,000
The wage earners would pay	23,040,000

I have not been able to check these estimates, but considering them in the light of the cost of health insurance in Great Britain, they do not seem wildly improbable.

In a communication from a London correspondent appearing in an American medical publication (*J. A. M. A.*, July 10, 1915, p. 185), it is stated concerning the cost in Great Britain that:

"Experts have calculated that national insurance for the current year will cost the state $30,300,000, which is no less than $7,500,000 more than that originally anticipated by the government. This excess * * * arises principally from subsequent additions to the benefits—particularly the medical and sanatorium benefits—and from the concessions granted to contributors falling into arrears with their payments on account of unemployment. The total cost to the state on account of national health insurance for the year is $37,000,000. It must be remembered that this is quite apart from the contributions payable by the insured persons themselves and their employers. Accounts do not yet show the amounts received in contributions, but it is probable that the total sum will not be much less than $92,000,000 for the year in question. On this assumption, the total cost to the nation for the national insurance scheme is no less than $130,000,000.

The burden of proof rests on the advocates of state insurance.—If compulsory health insurance will accomplish what its enthusiastic advocates claim for it—will secure proper medical care and treatment for the classes of wage earners who do not now receive them, will bring about the promised improvement in sanitation and living conditions and the consequent improvement in the general health of the community, and at less expense than other methods which would produce the same results—then as good citizens we are bound to favor the proposition whether it affects our individual interests adversely or otherwise.

However, those who propose changes in civil institutions thereby assume an obligation to show by a clear preponderance of evidence and argument that the proposed changes will accomplish what are claimed for them. When, as is the case with compulsory health insurance, the change will amount almost to a revolution in our industrial system, in the methods of poor relief and in public health activities, and will cause an increase in tax burdens never before heard of except in case of war, it behooves us more than ever to proceed with caution, and to insist upon the fullest consideration of a step which if once taken may be irrevocable, and if unwisely taken may be ruinous.

NOTES ON THE U. S. P. IX AND N. F. IV.*

BY J. P. SNYDER.

The ninth revision of the Pharmacopoeia and the N. F. IV have now been in our hands for nearly a year and pharmacists and chemists are rapidly adapting themselves to the many changes that have been made, in what I may term, official drugs, chemicals and preparations. I say this reservedly, as I understand there is a question whether or not the courts still recognize the U. S. P. VIII and that in order for the ninth revision of the Pharmacopoeia to be recognized, it may be necessary for Congress to pass a law to that effect.

To one who has found it necessary to perform analytical work under the U. S. P. VIII and the U. S. P. IX, it is apparent that there is a decided improvement in the chemical assays of the latter, and although there is no doubt considerable room for improvement with many, there are but very few chemical methods which will not admit of some change, when closely scrutinized. A method which may appear to be ideal to one chemist may contain, in the mind of another, serious errors, which in his opinion may vitally affect his results.

A few years ago I had occasion to examine some resin jalap according to the U. S. P. VIII. The requirements for resin jalap under this revision were, among others, that not more than 35 percent should be soluble in chloroform. After making many different determinations I was led to the conclusion that the amount of chloroform-soluble of resin jalap depended entirely upon the method used, and that from the viewpoint of this requirement, one could decide that the resin either did or did not meet the U. S. P. requirements, according to whether or not he was a "bull" or a "bear."

I called this to the attention of the Revision Committee and was pleased to read the following in the U. S. P. IX, concerning the method for determining the chloroform-soluble:

> "Add one gramme of powdered resin to ten mils of chloroform in a stoppered flask and shake the mixture occasionally during one hour; then filter, evaporate the filtrate in a tared dish and dry the residue to constant weight at 100° C. It weighs not more than 0.3 Gm."

Surely, I thought these directions so explicit that no further difficulty would be experienced with the chloroform-soluble of resin jalap. However, in the May issue of the JOURNAL A. PH. A., I read the following from the pen of an exceptionally competent chemist:

> "*Resin Jalap.*—The method for determining chloroform and ether-soluble matter are lacking in details. We are directed to add one gramme of the powdered resin to ten mils of chloroform (or ether) in a stoppered flask and shake the mixture occasionally during one hour, then filter, evaporate the filtrate, etc. The operator is left in doubt as to the washing, size of filter to use or any precautions to be observed."

I did not consider these details necessary, but considered them simply a matter of technique, and presumed that no one would attempt to filter the entire mixture, but would take an aliquot part, filtering through a 9 to 11 cm. filter, rejecting the first five or ten Cc. However, this chemist evidently finds the method lacking

* Read before N. Y. State Pharmaceutical Association Meeting, 1917.

in these details a serious objection, which goes to show the difference of opinions that may be held concerning the same method.

I shall endeavor to point out some of the difficulties which we have had with the pharmacopoeial tests and some of the ways and means we have adopted to overcome them.

The Pharmacopoeia directs in the determination of bromides, iodides and chlorides that after the addition of a definite amount of silver nitrate to the weighed sample that the whole be titrated back with potassium sulphocyanide. The latter salt has become exceptionally scarce and at present it is practically unobtainable. We have, however, substituted the sodium salt for the potassium, and so far this has given excellent results in our hands, and I would recommend to any who are unable to obtain the potassium salt that they use the substitute.

Fluidextract Ipecac: The new low alcohol menstruum of the U. S. P. IX is not nearly as satisfactory for exhausting the drug as the menstruum of the U. S. P. VIII; in fact, the former fails to extract but little more than 75 percent of the alkaloid, and with an expensive drug like ipecac, this becomes a very important item. Excessive percolation and consequent concentration produces a large amount of precipitate, which keeps coming down for several months. The standards of at least 1.75 percent for the drug and from 1.8 to 2.2 Gm. per 100 Cc. of the alkaloids for the fluidextract, do not agree. Since no difficulty is experienced in obtaining a drug which will contain at least 2 percent alkaloids, the standard for the drug might be raised to this amount; in fact, I would advise very strongly against accepting any drug that did not at least assay this much.

Crude Drugs: The standard for crude drugs has been raised in both the U. S. P. and N. F., which should lead to a better grade of drugs being offered. Considerable difficulty is experienced in having collectors obtain the part of the drug which is official. They are particularly prone to gather the entire herb, when leaves and flowering tops are specified. In fact, at present, lobelia which meets the U. S. P. description, is unobtainable and only recently we examined a parcel of eupatorium that contained 40 percent stem.

Tincture Ginger: The U. S. P. directs that the tincture should not contain more than 2 percent solids and that when treated with 20 mils of cold distilled water, not more than 15 percent dissolves. The amount of water-soluble from practically every tincture made from U. S. P. Jamaica Ginger is higher than 15 percent. The U. S. P. does not state the length of time the ginger solids should remain in contact with the water, and as the results obtained vary with the length of time the solids remain with the water, it is extremely important that this test should be revised; also the statement that it should not contain more than 2 percent solids, invites adulteration, as it is possible to have a tincture containing $1^1/_2$ Gm. of solids in each 100 Cc. and to add an equal volume of alcohol, which would reduce the solids to 0.75 and still have them meet the U. S. P. test. The following would probably be good standards and comply with the results of many investigators:

Solids from 1.25 percent to 1.75 percent.
Alcohol about 90 percent.

It may be possible to drop entirely the water-soluble solid test, as the informa-

tion obtained from this is of no practical value if the alcohol is in the neighborhood of 90 percent.

Beef, Iron and Wine: The N. F. gives lengthy tests for solid extracts of beef but gives no test for beef, iron and wine. The Internal Revenue Department requires that the proteid content of beef, iron and wine be at least 1.4 percent. Since the N. F. directs that ammonia be used in making beef, iron and wine, when making the proteid determination it is necessary to take this into consideration and first make an ammonia determination, when calculating the proteid content.

Calcined Magnesia: There appears to be very little upon the market that will fulfill the U. S. P. requirements, as most of it contains an excess of moisture, assays low and yields more calcium than is permitted in the official salt.

Indicators: The Pharmacopoeia also recognizes methyl red in addition to cochineal. Our experience with methyl red is that with practically all alkaloids, results four or five percent low are obtained. However, the end point is much sharper than when using cochineal.

Physiological Assay: The admission into the U. S. P. IX for the first time of biological assays is undoubtedly a step in the right direction and while these assays are, no doubt, far from perfect and will be subject to severe criticism, eventually much good must come from the criticism and we will obtain much better methods for physiological assay.

I wish to point out one thing that is probably peculiar to the State of New York concerning the physiological assays, and which may avoid some difficulty and save money for those who are occupied making physiological tests.

The Pharmacopoeia directs that the frog method be used for determining the activity of several of the preparations—digitalis, strophanthus, etc., but the State of New York has a closed season on frogs, from March 1st to June 1st, and it is unlawful to kill them or possess them during this time without a permit from the Conservation Commission. This may be obtained by applying to the proper authorities and filing bond. The Pharmacopoeia has made two biological methods official, *viz.*, Cannabis and pituitary extract, and has given provisional methods for digitalis, squill, strophanthus, suprarenal glands and aconite. Much criticism has been given the U. S. P. cannabis assay, by several workers who state that the dose is too small to produce incoördination. This should be thoroughly investigated. From our experience we are inclined to believe that a larger dose is not necessary.

For standardizing pituitary, the isolated uterus method is directed and a standard histimine is given with which to compare the extracts. This salt is practically unobtainable except in solution, put up in ampuls or in tablet form, and the activity of different salts vary to a considerable extent. I have received an ampul and a tablet which were claimed to contain the same amounts, which showed over 100 percent difference in activity. Furthermore, it has not been shown that histimine is not subject to deterioration. Histimine is evidently not as satisfactory a standard for pituitary extract as a solution made from dry, defatted gland, as histimine does not possess the well-known physiological property of raising the blood pressure.

For the digitalis series, the Pharmacopoeia directs that the one-hour frog method be used and which yields in the hands of experienced operators good

results. The standard ouabain is also practically unobtainable at present in the United States and it is claimed that it is not uniform. The use of conical glasses and a pipette are unnecessary, as the use of a hypodermic syringe, graduated in 1/100 Cc. is much more convenient and accurate for measuring the preparation.

In the N. F. IV, under Fluidextract Apocynum, we read the following:

"For a method of assaying fluidextract apocynum, see biological assays U. S. P. IX, Part II."

However, in the U. S. P. IX there is no standard given for apocynum, and no reference is made to it. I have been given to understand by one of the members of the Pharmacopoeial Committee, to whose attention I called this, that the committee intended that apocynum was to be standardized by the frog method. He, however, did not know what the standard was to be.

Aconite Preparations: In addition to the chemical assays, the drug and preparation may be physiologically tested upon guinea pigs. No precaution, however, is to be taken to standardize the pigs, and since these animals show a seasonal variation to ouabain, is it not possible that they also do the same toward aconite alkaloids? The *Epitome of the U. S. P. and N. F.*, prepared for the use of physicians, under the authorization of the Council of Pharmacy and Chemistry of the American Medical Association, states that physicians should specify aconite preparations that have been assayed biologically, since the alkaloidal assay is not a reliable index to activity.

Suprarenal Glands: The blood pressure method is recommended and gives very satisfactory results. The method of using both femoral veins instead of one, does not yield as close checks as when the injection is made into the saphenous vein. The standard laevo-methylamino-ethanol-catechol is extremely difficult to obtain.

Ergot: It is to be regretted that the U. S. P. has not provided a biological assay for this drug, as very good results are obtained by the blood pressure method and there is considerable drug upon the market which has very little pressure activity.

THOSE WHO CONTEMPLATE GOING TO PHARMACY SCHOOLS SHOULD NOT CHANGE THEIR MINDS ON ACCOUNT OF THE WAR.

President Wilson has clearly pointed out that those who are at work in the school-rooms are serving their country just as surely as those who are already in training camps, or are on the field of battle or are giving their country the benefit of their service as experts. The country at war, and afterward at peace will need the technically trained men more than ever. The cry that the colleges and technical schools shall maintain all their courses and that there should be no falling off in the enrollment at the technical institutes applies to schools of pharmacy with equal force.

SUPPLEMENTAL NOTE ON TESTING OF ETHER.

BY A. B. LYONS.

In the formula published in the June number of the JOURNAL for deducing from specific-gravity determinations the proportions, respectively, of alcohol and water in samples of official ether, there occur two errors which should be corrected with pen and ink in the text.

On page 554, line 6, change Dif. to Dif.′

On page 554, line 7, change Dif.′ to Dif.

The corrected formula will read:

Let Dif. stand for the difference in specific gravity taken accurately at 25° C. before and after dehydration with potassium carbonate, the unit of comparison being water at 25° C.; also let Dif.′ stand for the difference in specific gravity between anhydrous ether and the dehydrated sample. According to Perkins, anhydrous ether on the foregoing basis has a specific gravity of 0.70968. This assumes a mercurial thermometer, no correction being made for vacuum weighings. If one prefers, the temperatures can be adjusted according to the hydrogen scale, and they may be reduced to a vacuum basis, provided the same basis be employed in all the determinations. In such case, of course, the figure given above as the specific gravity of anhydrous ether must be changed.

The formula in any case will read:

Dif.′ × 895 = Volume percent of alcohol.

Dif. × 185.5 = Volume percent of water.

However the percentages in the U. S. P. description of ether are percentages by weight, not by volume. To give the former, the foregoing factors must be changed, so that the formulas become:

Dif.′ × 975 = percent by weight of alcohol.

Dif. × 260 = percent by weight of water.

The results will approximate quite closely to the truth—considering that we are dealing with a fluid which is at once highly volatile and having a large coefficient of expansion by heat.

There remains the question of the exact specific gravity of anhydrous ether. My attention has only recently been called to the determination of this constant made two years ago by E. Mallinckrodt and A. D. Alt, published in the September 1916 issue of the *Journal of Industrial and Engineering Chemistry*. A mean of four determinations gave as the specific gravity *in vacuo* on basis $\frac{25^\circ\ C.}{25^\circ\ C.}$ (hydrogen scale) 0.70988. The figure seems to be lower than that of Dr. Squibb which again is lower than that of Perkins. I incline to accept provisionally Dr. Squibb's figure, *viz.*, 0.70958 at $\frac{25^\circ\ C.}{25^\circ\ C.}$ (mercurial scale, not corrected to vacuum equivalent). Reduced to vacuum and hydrogen scale, the figure would be 0.70993, which is very close to the value accepted by Mallinckrodt and Alt, *viz.*, 0.70991.

It is simplest in practice to use uncorrected specific gravities, adopting the value given above as that of Dr. Squibb, *viz.*, 0.70958 for the specific gravity of anhydrous ether.

SECTION ON HISTORICAL PHARMACY, AMERICAN PHARMACEUTICAL ASSOCIATION

MY EARLY EXPERIENCES IN THE DRUG TRADE.*

BY JOSEPH L. LEMBERGER.

Our worthy chairman, with his usual zeal and persuasive influence, has induced the writer to offer a volunteer paper; he indicated the subject but did not hand me copy. I believe he fully expects me to unbosom early experiences in the drug business. I will try not to disappoint him, even though I may stray into some of the later experiences for the sake of history. Contrasts are allowable, as this paper is to be an historic relic. I am carrying my convictions along this thought and purpose unfolding early recollections of a verdant country lad.

When the writer first felt a desire to learn the drug business the *only way open* was to become an apprentice. The advertisement read: "*Wanted.*—An apprentice to learn the Drug Business. Address, P. Chemist, Ledger Office, Phila."

This advertisement was answered and with my father's aid found the way to the store in Philadelphia. At my age, less than 14 years, the transaction in mind involved submission to being bound by indenture for a term of six years and seventeen days. Before much serious thought was given to the transaction I was put through a rather unpromising examination somewhat of a physical character. I overheard the remark made to my father, "He's a little fellow, I wanted a taller boy," and my father's reply, "You know, doctor, the most valuable goods come in small packages." There was no argument on that point. The next query was addressed to me—"You are from the country, do you speak German?" My father answered for me that I not only spoke, but could read and write the language, having taken up the study of German at school. A German doctor's prescription, just presented, was handed me to translate the directions. I had no difficulty writing in the language "Einen theelöffel voll alle zwei stunden" (one teaspoonful every two hours), and after testing my ability to handle the heavy wood slides, protecting the glass in the doors, a regular duty at closing shop at night, indicating that I had some muscle, I was passed upon favorably as an applicant. With my father at my side helping me to determine the subject I willingly submitted to severance from the home family ties, and enter the family and service of a stranger and new master thereafter, until I would become of age, 21 years. The papers were prepared and duly signed and I became an indentured or bound apprentice, my compensation being board, washing, clothing and the full privileges and cost of the Philadelphia College of Pharmacy included. At that time there was no other college of pharmacy, and I graduated with the class of 1854, two years before the expiration of my apprenticeship. This incident gave my employer the benefit of two years' service of a graduate in pharmacy, at the small salary of board, washing and clothing and *very few* tips or perquisites.

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* Read before Section on Historical Pharmacy, A. Ph. A., Atlantic City meeting, 1916.

When I embarked upon the enterprise of learning to be a pharmacist I had at that early period a year's experience in a country general store, which was a commercial advantage and an asset in favor of my employer, as it was easy for me as a country youth to receive and wait upon customers with polite attention, although my previous service had been among Pennsylvania German people, I could readily adapt myself to this new community composed, to a considerable extent, of foreign Germans.

The rules of the drug store governing my relation to new conditions were rigidly impressed upon me. I was soon made acquainted with the various duties devolving upon the apprentice. A fixed set of rules were posted in a prominent place, and I was informed that the closer attention paid to the requirement of said rules the more comfort would I find in the new position.

My first duty was to become well acquainted with my daily routine of work, and it was not long before I fully understood my status as the bottle washer, the daily sweeping of the floor, dusting counter cases, drawers, cleaning the shelf bottles, mopping the floor once and sometimes twice a week, cleaning windows every Friday, also learning the place for everything and putting everything in its proper place.

One of the rules intended to make the right impression was as follows: "Have a place for everything and everything in its place." One of the novelties to this country lad was the opening and closing the heavy window shutters every morning and evening, and placing and removing the slides on outside door front.

I was instructed to familiarize myself with names, taste, smell and color of all drugs, roots, herbs, tinctures and all other preparations. This soon became an inspiring factor when washing and arranging the shelf bottles, especially as I was inclined to be inquisitive and wanted to familiarize myself with all that belonged to the business. The peculiar appearance of a bottle labeled Aqua Ammonia took my attention. I was on a step ladder, requiring that to reach this particular shelf, and taking a smell—you know the result from similar experience; this made an indelible impression, and I have never forgotten the useful lesson taught me, and afterward it was some satisfaction to play the trick on others just as unsophisticated.

I was early taught the value of weights, and the graduate measures, and knowledge of capacity all along the line from a drachm vial to gallon bottle and from the smallest tin box to the gallipots and jars. The specie jar with metal cover was in use at that period. Much care was taken to have me learn to make a neat package, and it soon became my duty to put up epsom salts, senna and manna, in 3 and 5 cent packages, to be ready on call; cut powder papers of various sizes for prescription use and Seidlitz and Soda powder. In the early days I was allowed to be at the prescription case, read and study the prescriptions, and witness the compounding, and ere long was permitted to cut and roll the pills by hand and with the pill machine, the preceptor, or senior clerk, preparing the mass. I had an ambition to do everything I saw others do and after my first year in the college of pharmacy I realized that I was making progress and was permitted to make the more simple preparations of the Pharmacopoeia. During my first and second year a senior clerk was employed; after that time I was considered qualified and under the surveillance of my preceptor, to some extent, to take charge of the store and make most of the preparations. Many pleasant mem-

ories come to me as I review those times, among the number is the association with the three evenings a week during the college course. The tramp of about 2 miles to the college were equivalent to recreation walks. There were no afternoon and evenings for the apprentice, except as a special privilege, at long intervals. Those trips to the college generally included the companionship of other students in that district, and these tramps were often spent in quizzing each other on matters appertaining to the lectures. This quiz feature was found very useful. We had no quiz masters those days as later introduced, and now in vogue in most of the colleges.

The retail drug business of that period was vastly different from what it is today, and it is not surprising to hear occasionally that we are losing our identity. Many things are sold in drug stores now, that were not thought of in that day. We generally kept what our customers wanted and in this particular store they sometimes wanted glass and putty and an occasional call for mixed paint and I have a memory of a remarkable fact, that these articles were most frequently called for on a Sunday morning. There were no mixed paints in that day in convenient tins of one-quarter or one-half pound. We had mixed white lead as a base and with aid of chromes, yellow and green, Prussian blue, vermilion, lamp black, we were able to accommodate such calls. There were no side lines, such as a soda water and sandwich counter, cigars and tobacco, confectionery, wash rags, cheap watches, cutlery, safety razors and chewing gum. We did sell good toilet soap, most generally imported white and mottled castile and the highly perfumed Brown Windsor, home made cologne water, and the foreign Farina cologne and a few French extracts for the handkerchief, and we made a specialty of genuine chamois skins and sponges.

The writer was messenger boy and enjoyed the outing when we had a call for something "just out of;" the run down town to Jenks & Ogden, or Charles Ellis & Co., or out to Powers & Weightman was generally an acceptable innovation. No horse or trolley cars then; there were occasional omnibuses, not for the accommodation of the drug apprentice; it was economy to walk; the bicycle was not in use then either. Things are different now, as we all know. I want to emphasize the fact that the drug store of that day was what the patrons expected it to be—a place to get the medicinest hey needed: three cents' worth of epsom salts to the family receipt for cough syrup or the doctor's prescription. We did compound prescriptions with care, as our sign on side of house indicated, and we made all our own preparations, some solid extracts, fluidextracts, tinctures, in the good old way, by percolation. The iron mortar and pestle was in practical use, now seldom seen in the modern pharmacy. The Swift drug mill was also one of my companions. We had no drug millers at that time to prepare the powdered or granulated drugs. We went to the basic thing; if it was tincture of rhubarb, aloes, cinchona, columbo, or any other bitter or aromatic drug, we got busy with the mill or mortar, with the aid of our bolting cloth or wire sieve, made what we wanted, and we did it skillfully and cheerfully, of course. You will agree with the writer that the use of iron mortar and pestle is almost a forgotten art in many modern stores. We powdered all the pulverizable drugs we needed. Your historian well remembers his aversion to aloes and acknowledges the frequent temptation, and sometimes expressed with mild harmless expletives, his feelings, when aloes had

to be powdered and sieved to make tincture of aloes or of aloes and myrrh or *Hiera Picra*, all of which preparations were popular remedies in that day.

This apprentice had an *extra* experience that I venture to affirm few others had. My preceptor was a mechanical genius, as well as a practicing physician and pharmacist. As a sideline he had orders for articulated human skeletons. The bones were obtained from the University dissecting department, where they were carefully boiled, cleaned and dried, presumably by the janitor. By means of a turning lathe and screw cutting device, the necessary work was done by ourselves. Any spare time was occupied in drilling proper holes through the parts, the sternum ribs, vertebra, etc., assembling the bones of the wrist, hands and feet, joining the parts together with fine brass wire. The cranium and vertebra were strung on a heavy brass wire extending through the coccyx, the thorax being completed by wiring the end of the rib to the vertebra on back and the sternum cartillage in front. The lower part from hip bones to feet were joined to the upper part through the middle or hip and the job was completed. Of course, you wonder how such preparation, so foreign to the retail drug business, found sale. When finished, they were easily packed in short boxes, as the arms were hinged at the elbow and the legs at the knee, and when ready for the market were delivered to a manufacturer of all kinds of secret society paraphernalia and are, or were no doubt used in secret society initiation ceremony. I never learned that as a fact, but have received that impression in later years. We never exhibited the anatomical specimens in the show windows, nor did the apprentice know the price received for them.

We also had another innovation; my preceptor had all necessary moulds for making fireworks and we were skilled in the art of making sky rockets and Roman candles for the Fourth of July celebration. These extra experiences did not demoralize the business nor the apprentice; on the contrary were personally useful and educational. Many changes have taken place since that period and I want to refer to a few things in conclusion, incidental to later times, the present age. Animal fats were rarely called for in our store. We did sell bear's grease and dog fat, while at the present time we are expected to have polecat fat (or skunk fat), rabbit fat, opossum fat, goose grease, rattle snake fat or oil, weasel skin, eel skin, and because we country druggists are supposed to have almost everything wanted in the line of remedies for all sorts of ills, it was quite natural for an old lady living about ten miles up the pike, for whose rheumatism some friend had recommended the use of the skin of a rattlesnake as a bandage, to write to us for the remedy, as she was informed that she "could get any kind of remedy at Lemberger & Company's drug store in Lebanon." On receiving this very complimentary letter we replied that we had none on hand but it was possible for us to send her the article in a week or ten days, as we knew a person who hunted for rattlesnakes and prepared the skin and the oil for sale. The man was a truck farmer living near the Blue Mountain, and came into the store next day, being market day. He informed us that he had none on hand, but expecting to go to the mountain for berries the coming week, believed he could promise one by next market day, and true to his word, next Saturday morning, imagine our surprise when he left a package and on opening we discovered a glass covered box with a three-foot rattler confined therein. We very cautiously handled that package, and soon our friend informed us that the catch was made too late the day before to skin and clean the

reptile, and as he had promised to bring us a rattlesnake skin he wanted to make good. We objected to dealing in a strange art; we wanted the skin without the snake. He enjoyed his joke and satisfied with the explanation, he took the snake home, killed, skinned and prepared the fat and, having caught another in the interim, we had an option on two with rattles in place, complete on both, as well as the fat, or so-called rattlesnake oil. Our old lady friend got the skin she wanted, paid the price and we hope she was cured.

Incidents *ad infinitum*, serious, comic and otherwise, might be incorporated in this historic paper. It has been extended sufficiently, I feel sure, and, I trust will suffice to make good my promise to our friend, the chairman.

THE FINANCIAL AND ACCOUNTING SIDE OF THE DRUG STORE.*

BY E. FULLERTON COOK, P.D.

Bookkeeping in a retail drug store is not a popular subject because there is usually enough other work to be done which forces itself upon those in the store and shows immediate results, while accounting is looked upon by many as a luxury and not a real necessity.

Furthermore, the proprietor of the usual drug store, who would have to keep his own books, feels that the kind of bookkeeping which will give the facts so often talked about to-day, *i. e.*, percentage relations between sales, "first cost," expenses and net profit, "overhead," gross profit, etc., is too complicated for his use.

Bookkeeping naturally falls into two distinct divisions: First, that which provides the necessary records for the accounts of credit customers; and, secondly, that which is specifically for the benefit of the proprietor of the store.

Every store which does any credit business is compelled to carry on the first type in a more or less perfect fashion, but it is the second type of accounting that I especially wish to discuss, and urge the adoption of.

Double entry methods are generally those recommended for securing these guiding facts for business, but fifteen years of teaching double entry has demonstrated the futility of expecting its adoption in the average drug store. This condition stimulated the development of an accounting scheme which would not involve a large amount of work or special training, and yet would yield figures and facts comparable in value with those from double entry books.

This plan requires a daily record, for which a special form was devised (See Fig. 1). Here are recorded the daily cash and credit sales, either in total or classified as desired; also the petty cash expenditures of the day, each followed by a classifying word, such as "Lemons 40 cents, soda" (the "soda" to indicate that the lemons are charged to the soda supplies), and at the bottom of the sheet a simple form for determining the theoretical "cash balance" for the day.

The bank account is kept on the opposite side of the sheet (See Fig. 2), the checks drawn being recorded here in detail instead of on the check book stub, as is usually done. Through this plan the record becomes a part of the books of accounts, while the bank balance is determined each day and with less work than

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* Read at the meeting of New Jersey Pharmaceutical Association, 1917.

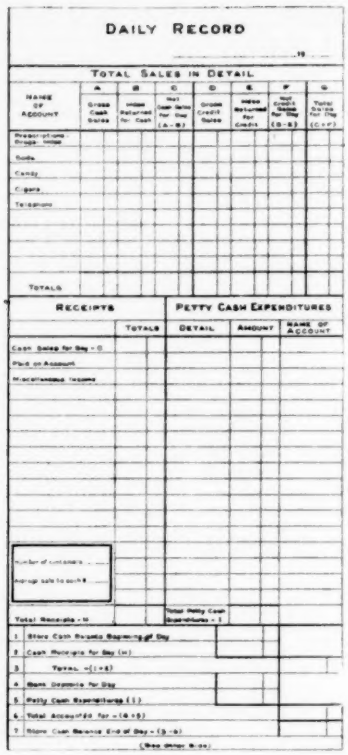


FIG. 1

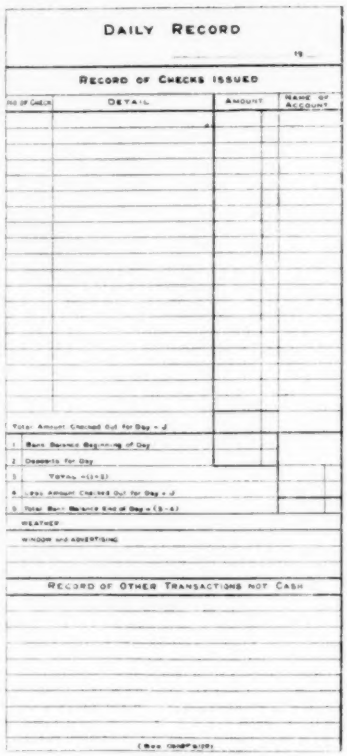


FIG. 2

was required in the old check book, since the figures are all in one column for addition and only one subtraction is required.

Here again after each check recorded a word is added, such as "light," "rent," "mdse.," "insurance," etc., to give the necessary classification.

Weekly, or whenever desired, these daily sheets, each complete in itself, may be entered upon the monthly sheets, where columns are provided for all important records, and a space for each day of the month. On these sheets the only entries are figures, thus reducing the physical labor to a minimum.

Another form (see Fig. 3) is provided for a record of invoices as received from the various supply houses. Here is recorded the party to whom the amount is due, the date of the bill and date for payment for discount. The original is filed below the record on a Shannon file. When the invoice is paid the date of payment and number of check are entered, whereby all unpaid invoices may be seen at a glance and also the date when they are due.

The totals for each month are afterwards transferred to similar sheets, arranged for a year's figures (See Figs. 4 and 5), and here all facts may be compared by months and the final yearly figures made up, showing net and gross profit, etc.

The advantages of classified columnar records in monthly or yearly summaries, in comparison with the ordinary bookkeeping systems, becomes strikingly apparent when the business man desires to analyze the facts concerning his business. If his records are kept by the double entry system, or by another plan which is less comprehensive than double entry, in order to arrive at comparisons and the anal-

ysis of the business, it is necessary to secure totals from the various books, assemble them in a statement and then draw deductions. To secure this statement all books must be closed and their accuracy proven. Even though a bookkeeper is employed, the conditions in the ordinary drug store are such that this bookkeeper will have other duties. When the end of the month arrives there will be bills to get out, and other records to complete before the time will be taken to make such a statement. It is admitted by many who have tried to secure such records that the excuse will constantly come up that time has not yet been found to close the books, but that it will be done as soon as possible, which usually means some indefinite future date, and the longer it is postponed is the less likely to materialize.

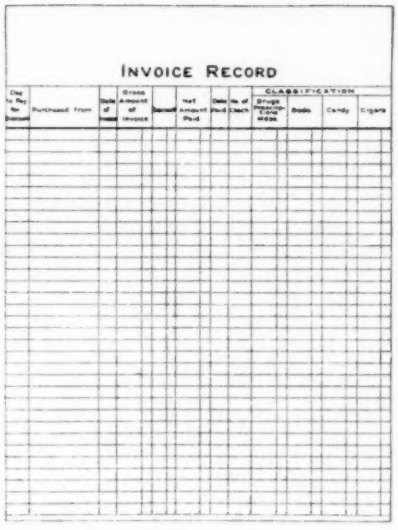
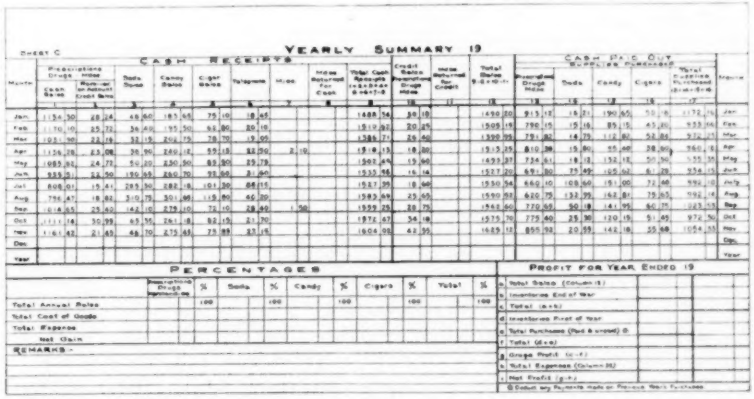

INVOICE RECORD

Fig. 3

In columnar records this is entirely changed. The figures come in from day to day. When they are in their proper column they are ready at any time for study and comparison. Less opportunity is afforded for manipulation, if the bookkeeper should desire to do so, as the books are readily checked up.

What are the advantages of having such figures? First, from month to month they give the proprietor a comparison with the business of the same month last year, and indicate the advance or falling off in the business—a desirable bit of information.


YEARLY SUMMARY 19

CASH RECEIPTS

PERCENTAGES

PROFIT FOR YEAR ENDED 19

Fig. 4

Secondly, having determined the relationship maintained during the preceding year between expenses and sales, the proprietor can determine each month whether this ratio is being continued. If it changes materially, especially if the percent for expenses begins to increase to any marked degree, he is warned in time

FIG. 5

of a serious menace to the profits of the year. This will at once suggest a study of the detail which is spread before him on the sheets. It means that sales have decreased or that expenses have exceeded the normal.

If expenses are increasing he can see, through the analyzed record, exactly where this increase occurs. If it is light that is costing more than last year for the same month, he can take the necessary steps to correct this loss. It may be that some one is allowing the cellar lights to burn unnecessarily, and he can install a small light by the desk or prescription counter which will always burn when the current is turned on in the cellar, and indicate unnecessary waste of light; or perhaps he can replace a number of small lamps with one large lamp, and thus save unnecessary expense.

If, on the other hand, he finds that the expenses are not increased, but the percent is larger only because of decreased sales, several causes may be suggested and can possibly be remedied. The first thought is that perhaps some employee is pocketing the cash, or perhaps sales have actually lessened and need stimulation from efficient advertising. The use of this relationship between sales and expenses to suggest theft in a store is being used by many business men. Of course, it will not show the taking of a cigar, or a dollar bill, but would quickly indicate any theft that would prove a serious loss.

If the percent relation last year was:		
Sales	100 percent	
First cost of goods	65 percent	
Expenses	25 percent	
Net profit	10 percent	
Then if the inventory Jan. 1st was		$ 7,000.00
And goods bought since Jan. 1st, cost		3,000.00
The total value would be		$10,000.00
Now the sales since Jan. 1st are	$4,600.00	
and goods sold cost 65 percent of $4,600.00, or		$ 2,990.00
Therefore, the present inventory by calculation (using the law of averages) would be		$ 7,010.00

Third, these figures may be used at any time as the basis for a calculated inventory. If an actual physical inventory has been taken at some date within a reasonable time and the relationship between the cost of goods and sales for the preceding year has been determined accurately, by now adding to the inventory the cost of goods bought since the inventory was taken, and subtracting from it the estimated cost of goods sold since the actual inventory, the result will indicate approximately the present value of stock. The illustration on p. 724 will show the possibility of such a calculation.

Therefore, it will be seen that, even without drawing any other conclusions at the end of the year or other definite period, records of this type are of great value to a business man, in enabling him to control his business. However, it is possible to arrive at other very definite conclusions which every business man should know at stated intervals.

First: What is the actual net profit obtained from a business of any one year? This is arrived at theoretically by subtracting the cost of the goods bought from the total sales, thus ascertaining what is called the gross profit. From this must then be subtracted the total expenses, the resulting figure indicating the net profit from the business. Sometimes the expenses exceed the gross profit, when the business man must face the fact that he has conducted the business at a loss during the period covered by the figures.

The statement just given concerning the method of arriving at net profit is slightly complicated by the necessity of introducing inventory figures to show the value of goods on hand at the beginning of the period covered by the records, and at its close. By this means the cost of goods sold is corrected to make an allowance for any increase or decrease in the stock on hand when the books are closed. If this correction was not applied the stock might be greatly depleted and a false showing of profit indicated, or, on the other hand, a loss might be shown when in reality the profits of the year had been consumed by an increased stock.

Now, having determined that there is a definite net profit, or perhaps loss, it is necessary to prove that this is true. If the books show a $2,000.00 profit after all expenses have been paid, how is the proprietor to know that this is true? It may be that there is only $500.00 cash in bank, and he may have a number of obligations unpaid. It now becomes necessary, therefore, to assemble all the resources at his command, and also every liability standing against him, and thus show by actual assemblage of the facts that his resources do exceed his liabilities by the sum indicated on his books as profit.

He, of course, first considers any cash on hand, either at the store, or in bank, as resources. Then his inventory must be taken into account. First: Stock of merchandise, or any other salable goods; then his fixtures, including soda fountain, if this is in the store. Then any stock of coal, office supplies, such as bill heads, envelopes, letter paper, etc., any paid-up insurance policies or other securities he may hold. Good-will is also at times considered among his resources, although it is not believed to be a desirable asset to consider among definite resources, because it is not possible to realize any cash upon this asset until the owner of the store has actually sold his good-will for cash.

This brings up the question of depreciation. Depreciation should be allowed on fixtures, the soda fountain, buildings, good-will, etc. This is in accordance with

conservative and approved business practice. A depreciation of five percent yearly may be estimated on fixtures until the value is reduced to a point which becomes relatively permanent, and for which the fixtures could be sold, even though twenty years old. The justice of this custom is based on the fact that fixtures which are bought for a certain sum could not be sold the next year for as much as the original purchase price, and, therefore, it would be a false basis for resources if carried at the full cost. Each year the depreciation becomes greater, and the five percent basis is arrived at from an estimate that within at least twenty years new fixtures must be installed. In the case of the soda fountain ten percent depreciation is allowed, based upon a new soda fountain in ten years. This depreciation figure, which comes out of the profit, each year could wisely be put into a sinking fund, so that if new fixtures are to be furnished, the money will be on hand without calling for new capital.

Depreciation in "good-will" is open to argument and difference of opinion. A twenty percent depreciation each year for five years is based upon the belief that the good-will of any former proprietor, for which you may have paid a definite sum, will have entirely disappeared within five years. Therefore, the extra business because of his good-will—for which you have paid cold cash—should be great enough in the five years following the purchase to pay back the amount given for the good-will.

You may say that as his good-will disappears yours will increase and the good-will valuation is maintained at its original value, but this is not a tangible asset. A serious mistake in the store, causing the death of a customer, would wipe out this asset over night. It is considered to be a conservative management that does not estimate the good-will as an asset until it is actually sold and the money secured. It may then be a pleasant surprise, and of course the man selling the store should endeavor to obtain the highest possible price for his good-will.

In addition to the resources already named, all customers' unpaid accounts, and any notes receivable, or promissory notes given by debtors or any other value held by the business, such as delivery wagons, motorcycles, bicycles, etc., should be included. This total value is added and represents the total resources. With reference to customers' unpaid accounts, if any of these are uncollectable, they should be assembled and considered as an expense of that year's business, and must be deducted from the gross profits.

The liabilities are now assembled. The most important ones are unpaid invoices for merchandise or stock purchased and any notes which you may owe, either to parties from whom money was borrowed to start business, or to the wholesale house, or any other obligations. The sum of these represents the total liabilities.

Now it will be possible to prove the accuracy of the net profit indicated by the books. If the total liabilities, plus the capital at the beginning of the year, plus the net profit indicated for this year, exactly equal your total resources, the books are proven to be correct, and you can show to the bank or any creditor, or any mercantile agency or the income tax collector, an exact and authentic statement of facts concerning your business, which, if creditable, should do much to establish your standing as a business man.

Now, having determined these important facts about the year's business,

another statement should be prepared. This consists of an analysis of the relationship between the goods sold for the year, the cost of goods that year, the total expenses, and the net gain.

The total sales are taken from the records kept. The net profit is that indicated on the profit statement. The total expenses have also been assembled, and the figures are placed in this new statement. If now the expenses and the net profit are added, and this total subtracted from the annual sales, the difference will indicate the cost of goods sold that year. The sales are now shown as 100 percent, and *this is the only basis for satisfactory calculation*, because on this basis it is possible to arrive at definite relationships for the annual business, which can be compared from day to day throughout the entire succeeding year, the sales and expenses always being definite figures which may be known daily. This basis for calculation and percent is almost universally adopted to-day in the business world.

The relationship now of the first cost of goods to sales is determined on the percentage basis; then the relationship of expenses to sales; and, lastly, the relationship of net gain to sales. Ideal figures for most businesses are believed to be an average of about 65 percent for first cost of goods; 25 percent for expenses, and 10 percent for net profit. If the figures for any one year do not show something like this relationship the business man may take the necessary steps to bring about a more satisfactory ratio.

If the net profit is greater than indicated here, of course there is no need for concern. The proprietor is very fortunate. However, if the expenses are much higher in their percent relationship to sales, and net profit much lower, the proprietor has the necessary evidence to stimulate his efforts towards readjustment. It means that he will have to reduce expenses if that is practicable. A study of these may show him where some expense is excessive. On the other hand, he may find that the expenses cannot be reduced. Then he has the alternative of increasing the sales, which would materially reduce the percent relationship of the expenses, if he was not compelled, because of the increased sales, to add proportionally to the expense of the business. In almost every business, up to a certain point, more goods could be sold without greatly increasing the expense because most of the fixed costs would remain the same, such as rent, light, heat. There would probably be some increase in advertising, and possibly in salaries.

Of course he may improve the situation by eliminating goods which are showing small profit, or even loss, and replace them by more profitable merchandise; or perhaps, he is not closely watching the cost of regular goods, and that by more careful buying, or buying under different conditions, he may largely increase the margin of profit between first cost and the selling price, the latter being often fixed by the buying public and trade conditions, and not easily changed.

He is also in possession of figures which indicate to him the exact value of every sale. He is awakened to the fact that many articles that he has been selling freely have actually been passing over his counter at a loss. If wise he will endeavor to curtail such sales, only permitting those which are actually necessary to please customers, and will, on the other hand, select merchandise which gives a reasonable profit, and advertise and sell these in preference to the less profitable lines.

He will also recognize the importance of adding an adequate profit to the cost of professional work. In other words, by knowing these figures, the proprietor will gain a control of his business, which had not been possible heretofore, and which he will utilize to insure definite and dependable profits, and actually know from month to month whether the business is profitable or otherwise.

In determining the percentage relationship of sales, total cost of goods, expenses, and net gain in any one department, such as the soda fountain, candy sales, or cigars, the ordinary retail drug store is somewhat handicapped because of the difficulty of appropriating properly the general expenses. Purchases, of course, can be kept separate, and some expenses will be assigned definitely to a special department, such as laundry, or special clerks, but the division of rent, light heat, etc., among the several departments calls for good judgment and some study in each store. The floor space required for each department is usually the basis for this division of expenses. The front part of the store must bear the larger percentage. Of course, many stores to-day are introducing attractive features which compel the customer to visit the rear of the store. A sub-station post office in the back of the store, or telephone booths are especially effective.

Sometimes the front of the store, back one-fourth, would be expected to bear at least one-half the general expenses. The second fourth of the sales room would carry one-fourth of the expenses, while the last half of the sales room would be expected to pay the remaining expenses. Thus if the soda fountain was in the front of the store it would be expected to pay its share of the expenses in the ratio indicated. If half-way back, though occupying no smaller space, it would pay much less. Of course, this ratio must be determined by each man, and upon this the actual net profit in any one department determined.

Finally, it has been demonstrated by ample experience, that facts, such as these here referred to, concerning a business, if available, give a satisfaction and control to the proprietor which amply justify the comparatively small amount of labor required, and changes the business from a guess to a definite profit-making machine, the control of which is in his hands to manipulate almost as he will.

While special forms are here suggested the principle they represent may be applied by a business man through the use of columnar record books which may be bought at any stationer's.

PHARMACEUTICAL FORMULAS

PROPOSED FOR A. PH. A. RECIPE BOOK.

A complete list of these Proposed Formulas since February 1912 was published in an index in the December 1916 number of the JOURNAL. The Committee will continue its work in monthly instalments in this Department of the JOURNAL. Members of the A. Ph. A. are earnestly requested to send suitable formulas and also criticisms of those published to the Chairman.

Otto Raubenheimer, Brooklyn, N. Y.

No. 587.

EURESOL HAIR POMADE.

A.

White Ceresin	25 Gm.
Coconut Oil	75 Gm.
Euresol pro Capillis	5 Gm.

Melt ceresin and coconut oil and when cool add euresol.

Ceresin has a higher melting point than paraffin.

Coconut oil must not be confused with cacao butter or oil, *the official Oleum Theobromatis*, which melts at body temperature and is therefore used in suppositories, etc.

Coco alludes to the coconut tree or coconut palm, botanical name *cocos nucifera*, which is indigenous in the tropics. This palm has a branchless stem, 60 to 90 feet high, above which are feather-like leaves, 18 to 20 feet long, at the base of which hang the fruits in clusters of 12 to 20. From the kernel of the coconut, the coconut oil is expressed, which is liquid during warm weather, but a solid during the cool seasons. This oil is largely used in the preparation of soap and also for massage treatment.

B.

Euresol	5 Gm.
Unguentum Pomadinum	45 Gm.

Mix. Rub thoroughly into the scalp.

Contributed by the Chairman:

No. 588.

UNGUENTUM POMADINUM.

Pomade Ointment.

Unna.

Oil of Theobroma	10 Gm.
Expressed Oil of Almond	20 Gm.
Oil of Rose	1 drop

No. 589.

PIN'S COUGH MIXTURE.

Paregoric	
Syrup of Ipecac	
Spirit of Nitre	
Syrup of Squill	equal volumes

A favorite household cough remedy. The letters P, I, N, S stand for the first letters of the 4 ingredients.

No. 590.

RED INK.

Eosine	8 Gm.
Glycerin	8 mils
Water	500 mils

An excellent ink and cheap. For particulars about Eosine consult U. S. P. IX, p. 531.

No. 591.

TOOTH POWDER.

N. Y. Health Board.

Powdered Orris Root	4 Gm.
Powdered Castile Soap	15 Gm.
Precipitated Chalk	60 Gm.

The Department of Health of the City of New York wisely recommends this formula, but very unwisely fixes the price at 15 cents for above quantity.

No. 592.

CONFECTIO LAXATIVA.

Laxative Confection.

Household Physic.

Prunes	
Dates	
Seedless Raisins	
Figs, of each	120 Gm.
Senna	30 Gm.

Remove seeds from prunes and dates, mix all the ingredients and pass through a meat chopper to produce a uniform paste. A simplified modification of the old Confection of Senna. Keep in a well covered jar in a cool place.

Dose: 1 to 2 teaspoonfuls at bedtime.

No. 593.

LIQUOR CAPSICI COMPOSITUS.

Linimentum Capsici Compositum.

Ph. Aust. VIII.

Capsicum, ground	
Black Pepper, ground, of each	100 Gm.
Soft Soap	
Camphor, of each	25 Gm.
Alcohol, 90%	800 Gm.
Eugenol	
Oil of Rosemary, of each	5 Gm.
Oil of Cinnamon	1 Gm.
Ammonia Water	200 Gm.

Macerate the first 4 ingredients in the alcohol during 8 days, then express and filter and add the other ingredients.

No. 594.

ORRIS ROOT AND CHALK.

Powdered Orris Root	10 Gm.
Precip. Calcium Carbonate	90 Gm.

Mix. A very popular tooth powder, which can be flavored.

No. 595.

LINIMENTUM CAPSICI COMPOSITUM.

Pain Expeller.

Lux.

Ammonia Water	
Oleo-Balsamic Mixture N. F.	
Spirit of Camphor	
Soap Liniment, of each	150 Gm.
Tincture of Capsicum	100 Gm.
Alcohol, 90%	300 Gm.
Tincture of Caramel, N. F., sufficient to color	

No. 596.

AQUA DENTIFRICIA DR. PIERRE.

Tinctura Dentifricia.

Eau Dentifrice du Dr. Pierre.

Lux.

Star Anise, bruised	7.5	Gm.
Oil of Peppermint		
Oil of Star Anise, of each	25.0	drops
Scarlet Red	0.01	Gm.
Alcohol, 90%	100.00	Gm.

Macerate for about a week and filter. This preparation has a different tint than Formula No. 122, The JOURNAL, March 1916, p. 310, in which Red Saunders is used as a coloring agent.

No. 597.

TINCTURA SANTALI RUBRA.

Tincture of Red Saunders.

E. B.

Red Saunders, powdered	100 Gm.
Alcohol, 90%	500 Gm.

No. 598.

ESSENTIA DENTIFRICIA BOTOTI.

Botot's Dentifrice.

E. B.

Orris Root, cut	50.0 Gm.
Cassia Cinnamon, ground	
Star Anise, bruised	
Clove, bruised	
Galangal, N. F., cut, of each	25.0 Gm.
Cochineal, powdered	10.0 Gm.
Tannic Acid	5.0 Gm.
Oil of Peppermint	10.0 Gm.
Balsam of Peru	5.0 Gm.
Coumarin	0.1 Gm.
Oil of Neroli	0.75 Gm.
Oil of Rose	0.5 Gm.
Diluted Alcohol, 68%	1000.0 Gm.

Macerate during 3 days, express and filter.

See also Eau de Botot, Formula No. 451, The JOURNAL, March 1917, p. 298.

No. 599.

ESSENTIA DENTIFRICIA CUM ACIDO SALICYLICO.

Salicyl-Vanillin Dentifrice.

E. B.

Oil of Peppermint	2.0 Gm.
Oil of Cinnamon	0.5 Gm.
Salicylic Acid	2.5 Gm.
Vanillin	1.5 Gm.
Tincture of Red Saunders	50.0 Gm.
Alcohol, 90%	500.0 Gm.
Water, a sufficient quantity,	
To make	1000.0 Gm.

No. 600.

ESSENTIA DENTIFRICIA CUM SALOLO.

Salol Dentifrice.

Odol Substitute.

E. B.

Oil of Caraway	
Oil of Clove, of each	0.4 Gm.
Oil of Peppermint	5.0 Gm.
Saccharin	0.04 Gm.
Salol	25.00 Gm.
Tincture Red Saunders	50.00 Gm.
Alcohol, 90%, a sufficient quantity,	
To make	1000.00 Gm.

No. 601.

ESSENTIA DENTIFRICIA CUM THYMOLO.

Thymol Dentifrice.

E. B.

Thymol	1 Gm.
Botot's Dentifrice	99 Gm.

No. 602.

PASTA DENTIFRICA KALII CHLORICI.

Pasta Dentifrica Potassii Chloratis.

Unna's Potassium Chlorate Tooth Paste.

Lux.

Potassium, Chlorate, powdered	5 Gm.
Precipitated Chalk	
Orris Root, powdered	
Soap, powdered	
Glycerin, of each	25 Gm.
Oil of Peppermint	20 drops

The quantity of glycerin will be governed by the density of the precipitated chalk, that is, sufficient has to be used to make paste.

See also remarks under Formula No. 379, The JOURNAL, December 1916, p. 1399.

No. 603.

BALNEUM SULPHURATUM INODORUM.

Odorless Sulphurated Bath.

Bains Sulfureux Sans Odeur.

Sulfurine.

Lux.

Sodium Carbonate, dry	92 Gm.
Sublimed Sulphur	4 Gm.
Potassium Chromate	1 Gm.
Distilled Water	3 mils

Dissolve potassium chromate in the water and mix well with other ingredients. Then melt the mass in a covered crucible, which is only about half filled. Pour the fused mass on a cold marble slab, and after cooling break the finished product into pieces and preserve in well closed bottles.

No. 604.

BALSAMUM MAMMILLARE.

Nipple Balsam.

Lux.

Benzoic Acid	1 Gm.
Tannic Acid	5 Gm.
Glycerin	5 Gm.
Alcohol	20 Gm.
Rose Water	75 Gm.

Dissolve and filter.

No. 605.

NIPPLE WASH.

Dr. Thomas.

Alum, powdered	30 Gm.
Tincture of Nutgall, N. F. IV	30 mils

Triturate well.

No. 606.

PULVIS HAEMORRHOIDALIS.

Hemorrhoid Powder.

E. B.

Calcined Magnesia	
Washed Sulphur	
Potassium Bitartrate	
Senna, powdered	
Sugar, powdered	equal parts

Mix well.

A modification of Compound Licorice Powder, well adopted to regulate the bowels in piles or hemorrhoids.

No. 607.

OLEUM NIGRUM.

Black Oil. Farrier's Oil. Currier's Oil.

Fuming Oil.

Oil of Turpentine	
Linseed Oil, of each	500 mils
Sulphuric Acid	30 mils

Mix the oils and *gradually* and *with constant stirring* add the sulphuric acid. Great care must be used when the sulphuric acid is added, and the operation is best conducted in an open vessel.

Used as a liniment in veterinary practice. The quantity of sulphuric acid is sometimes increased or decreased according to the desired counter-irritant effect.

No. 608.

OLEOSACCHARUM CUMARINI.

Elaeosaccharum Cumarini.

Saccharum Cumarini. Coumarin Sugar.

D. M.

Coumarin	1 Gm.
Sugar, in fine powder	999 Gm.

Triturate well and keep in tightly stoppered bottles.

No. 609.

OLEOSACCHARUM VANILLINI.

Elaeosaccharum Vanillini.

Saccharum Vanillini. Vanillin Sugar.

D. M.

Vanillin	3 Gm.
Sugar, in fine powder	97 Gm.

Triturate well and keep in tightly stoppered

bottles. Vanillin Sugar has the same flavoring power as a *10% Vanilla Sugar* or *Oleosaccharum*. Besides this, it is colorless and more permanent.

For household use it can be dispensed in bottles bearing the following directions:

"Add a small amount of Vanillin Sugar to the food or drink, sufficient to impart the desired Vanilla odor or taste."

Contributed by John K. Thum, German Hospital, Philadelphia.

No. 610.

WRIGHT'S SOLUTION.

Wright's Antiseptic Solution.

Wright's Surgical Solution.

Sodium Citrate	10 Gm.
Sodium Chloride	40 Gm.
Distilled Water	1000 mils

Dissolve, filter and sterilize by boiling for half an hour.

This solution bears the name of Dr. Wright, an eminent British Surgeon. It is a mildly alkaline antiseptic and is used as a wet dressing for wounds to prevent clotting and thereby promote free drainage, a very desirable feature in badly infected wounds.

This surgical dressing must not be confused with Wright's Solution, Formula No. 557, published in THE JOURNAL, June 1917, p. 565, which is a Solution of Gold and Arsenic Bromide, about twice the strength of the N. F. solution with the same name.

Mr. Thum very correctly remarks that pharmacists must be careful not to dispense one solution for the other, as more or less disaster would result. For this reason, the Chairman suggests that the above solution should be designated as Wright's Antiseptic or Surgical Solution. After all, it is one of the chief duties of the dispensing pharmacist to use the utmost care in order to safeguard the patient. This is also an excellent illustration of the importance of the work of the Committee on A. Ph. A. Recipe Book and the necessity of clearing up the existing confusion in various formulas.

Contributed by Wm. Gray, Presbyterian Hospital, Chicago:

No. 611.

SENN'S SOLUTION.

Iodine	10 Gm.
Potassium Iodide	10 Gm.
Distilled Water, a sufficient quantity,	
To make	1000 mils

This solution is named after the famous Chicago surgeon, Nicolas Senn.

No. 612.

UNGUENTUM ALBUM.

White Ointment.

Zinc Oxide	100 Gm.
White Wax	25 Gm.
Phenol	2 Gm.
White Petrolatum, a sufficient quantity,	
To make	500 Gm.

A nice looking healing ointment, quite generally used by Chicago surgeons.

No. 613.

GRAY'S COUGH MIXTURE.

Ammonium Chloride	60 Gm.
Diluted Hydrocyanic Acid	8 mils
Chloroform	6 mils
Syrup Wild Cherry	500 mils
Syrup Lactucarium, a sufficient quantity,	
To make	1000 mils

Contributed by Aug. Diehl, Brooklyn:

No. 614.

SYRUPUS ERIODICTYI.

Syrup of Yerba Santa.

Fluidextract Yerba Santa	30 mils
Potassium Carbonate	6 Gm.
Water	15 mils
Syrup, a sufficient quantity,	
To make	500 mils

Mix the alkaline solution with the fluidextract and add the syrup.

Note! In some localities this syrup is extensively used, especially in bronchial coughs. It should not be confused with Aromatic Syrup of Yerba Santa, N. F., which is weaker, and which is employed as a vehicle for bitter medicines, especially quinine.

PROCEEDINGS OF THE LOCAL BRANCHES

NASHVILLE.

The regular monthly meeting of the Nashville Branch of the American Pharmaceutical Association was held in joint session with the Nashville Drug Club Thursday, July 19, when D. J. Kuhn presided.

The minutes of the previous session were read and approved. D. S. Sanders, chairman, of the committee appointed to look into the matter of mail order houses doing business in Tennessee without paying taxes, reported that attorneys had been employed by both parties to the question and that a test case will be made.

Attorney W. F. Davis spoke of the effort he is making to have the Tennessee Board of Equalization allow an exemption of $1000 on state taxes, as provided for by the constitution.

Doctors J. Witherspoon and C. F. Anderson, a committee of the Nashville Academy of Medicine, came before the meeting and stated that there was no drug store in Nashville that kept open all night, and that this was working a hardship on the public. In a discussion that followed, several in attendance stated that they had endeavored to keep their stores open all night, but the expense did not warrant their continuing to do so. C. W. Jennings consented to give the plan a trial.

Messrs. S. C. Davis and D. S. Sanders directed attention to the many recent advances in the prices of proprietaries and patent medicines, which in their opinion necessitated an advance in prices by the retailers. Messrs. M. C. Hutton and D. J. Kuhn stated that these conditions presented an opportunity for pharmacists to push their own line of preparations.

It was reported that unusual demands had developed since the enforcement of the State Bone Dry Liquor Law for bay rum, essence of Jamaica ginger and flavoring extracts. It was the unanimous opinion that such business should be carefully watched and if illegal use was being made, such sales should be turned down.

As a result of the indictment of a number of local ice manufacturers and dealers under the anti-trust laws, the price of ice in Chattanooga was immediately reduced and it was hoped that the same effect would result in Nashville.

The Nashville Drug Club voted to have a boat ride for the membership some time in August. A similar entertainment was pronounced a success last year. The annual election of officers of the Nashville Drug Club resulted as follows: *President*, D. J. Kuhn; *First Vice-President*, Ira B. Clark; *Second Vice-President*, C. C. Young; *Treasurer*, D. S. Sanders; *Secretary*, William R. White.

WILLIAM R. WHITE, *Secretary*.

COUNCIL BUSINESS

A. PH. A. COUNCIL LETTER NO. 25.

PHILADELPHIA, PA., July 1, 1917.

To the Members of the Council:

Motion No. 30 (Additional appropriation of $100.00 for National Drug Trade Conference) and No. 31 (Election of Members; application Nos. 149 to 172, inclusive), have each received a majority of affirmative votes.

Motion No. 32 (Election of Members). The following applications have been presented:

No. 173. Miss Rebecca Ocheret, 766 Coney Island Ave., Brooklyn, N. Y., rec. by H. B. Smith and Thos. J. France.

No. 174. Mr. Wm. Ambrose Jarrett, Univ. of Maine, Orono, Maine, rec. by Theodore J. Bradley and Hugh C. Muldoon.

No. 175. Mr. Abraham Silvermann, 524 New Jersey Ave., Brooklyn, N. Y., rec. by Otto Raubenheimer and Emil Roller.

No. 176. Mr. Attilio Graziani, 20 King St., New York, N. Y., rec. by Geo. C. Diekman and Hugo H. Schaefer.

No. 177. Mr. Leonard Steiger, Hillsdale, N. J., rec. by J. Leon Lascoff and Geo. C. Diekman.

No. 178. Mr. Boruch Klatz, 281 Nepperham Ave., Yonkers, N. Y., rec. by Dr. J. Diner and Gustave G. Hortsmann.

No. 179. Mr. Joseph Anthony Vaccarino, 295 Elizabeth St., New York, N. Y., rec. by Jacob Diner, M. D., and G. Horstmann.

No. 180. Mr. James Tesler, 52 Stagg St., Brooklyn, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 181. Mr. Charles A. Susslin, 2654 Valentine Ave., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 182. Mr. Joseph Michael Ruddy, 5 Keyes St., Warren, Mass., rec. by Dr. Jacob Diner and G. Horstmann.

No. 183. Mr. Wendell E. Phillips, Box 103, Bronxville, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 184. Mr. William Nelson, 1051 Boston Rd., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 185. Mr. Leon C. Monakey, Tupper Lake, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 186. Mr. Samuel Mozieleff, 1060 Forest Ave., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 187. Mr. David Miller, 1 Gates Ave., Brooklyn, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 188. Mr. Abraham Matlin, 962 Sou. Boulvd., Bronx, New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 189. Mr. Samarion Marchonski, 2025 LaFontain Ave., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 190. Mr. Jacob Lifshitz, 953 Fox St., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 191. Mr. Frank Vincent LaMonte, 2289 1st Ave., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 192. Mr. Samuel Liebman, 30 Humboldt St., Brooklyn, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 193. Mr. Boris S. Israel, 903 Teller Ave., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 194. Mr. Anthony Philip Koch, 248 Rivington St., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 195. Mr. Elihu S. Hurwitz, 1796 Bathgate Ave., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 196. Mr. Philip Goldberg, 804 E. 178th St., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 197. Mr. Anthony Ginliani, 3542 Holland Ave., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 198. Mr. Israel Fleishman, 933 E. 181st St., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 199. Mr. Julius Fiorilla, 304 W. 149th St., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 200. Mr. John B. Darcy, St. Vincents Hospital, New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 201. Mr. Arthur Adler, 973 Fox St., New York, N. Y., rec. by Dr. Jacob Diner and G. Horstmann.

No. 202. Mr. Sam P. Harben, Richardson, Texas, rec. by E. G. Eberle and Jacob Schrodt.

No. 203. Mr. Ivan Joseph Valin, 9 Orchard St., Auburn, N. Y., rec. by Charles B. Sears and A. E. Adams.

No. 204. Mr. Russell V. Rogers, 1200 Main St., Dallas, Texas, rec. by E. G. Eberle and C. A. Duncan.

No. 205. Mr. E. J. Lea, Bureau of Food & Drugs, Univ. of Cal., Berkeley, Cal., rec. by H. M. Whelpley and J. W. England.

No. 206. Mr. Joseph Cohen, 4201 Broadway, New York, N. Y., rec. by Benj. Bratter and Dr. H. M. Whelpley.

No. 207. Mr. Edward James Meister, 260 N. 11th St., Cedar Rapids, Iowa, rec. by W. J. Teeters and R. A. Kuever.

No. 208. Mr. Earl L. Hazeldine, Selby, S. Dak., rec. by G. Scherling and Wilber J. Teeters.

No. 209. Mr. John Wear, 3648 Chestnut St., Phila., Pa., rec. by Charles H. LaWall and Ivor Griffith.

No. 210. Mr. Emil P. Rauschert, 2303 Lincoln Ave., Chicago, Ill., rec. by A. H. Clarke, and Wm. B. Day.

No. 211. Mr. Charles Bidwell, Albion, Ind., rec. by Clyde M. Snow and Wm. B. Day.

No. 212. Mr. Hans Walter Vahlteich, 2000 N. Halsted St., Chicago, Ill., rec. by Wm. Gray and Wm. B. Day.

No. 213. Miss Rose Scheele Ruder, 1101 Berwyn Ave., Chicago, Ill., rec. by Wm. B. Day and E. N. Gathercoal.

No. 214. Mr. Edward A. Henderson, 3600 Univ. Ave., Los Angeles, Cal., rec. by Edward G. Binz and J. Lengfeld.

No. 215. Mr. Edward Emery Orr, Jr., 5 Florence St., Revere, Mass., rec. by Theodore J. Bradley and John G. Godding.

No. 216. Mr. Eugene Louis Sharkansky, 121 Cottage St., Fall River, Mass., rec. by C. Herbert Packard and Theodore J. Bradley.

No. 217. Miss Edna Mildred Follensby, Woodland Rd., Southborough, Mass., rec. by Howard H. Smith and Theodore J. Bradley.

No. 218. Mr. Stanley William Foulser, 40 Ashford St., Allston, Mass., rec. by Elie H. LaPierre and Theodore J. Bradley.

No. 219. Mr. Vincent Joseph Fitz-Simon, 829 N. Main St., Brockton, Mass., rec. by John G. Godding and Theodore J. Bradley.

No. 220. Mr. Francis Josephus Skye, 335 Exchange Ave., E. St. Louis, Ill., rec. by H. M. Whelpley and F. W. Sultan.

No. 221. Mr. Howard William Griesing, 21 N. Centre St., Merchantville, N. J., rec. by Charles H. LaWall and Ivor Griffith.

No. 222. Mr. Wm. D. Duncan, 717 LaSalle St., Ottawa, Ill., rec. by William Gray and C. A. Storer.

No. 223. Ray Allen Whidden, 161 N. Franklin St., Chicago, Ill., rec. by William Gray and Wm. B. Day.

No. 224. Mr. Byron Armstrong, Jacksonville, Ill., rec. by Wm. B. Day and Wm. Gray.

No. 225. Mr. Carl J. Herzog, 122 Hudson St., New York, N. Y., rec. by Fred J. Lackenbach and Wm. B. Day.

No. 226. Mr. John T. Davis, Jr., 325 Broadway, Hannibal, Mo., rec. by Otto F. Klaus and D. V. Whitney.

No. 227. Mr. Walding G. Rupp, 21 Kenilworth Dr., Toledo, Ohio, rec. by Charles H. LaWall and Dr. H. M. Whelpley.

J. W. ENGLAND, *Secretary of the Council.*
415 NORTH 33RD STREET.

A. PH. A. COUNCIL LETTER NO. 26.

PHILADELPHIA, PA., July 16, 1917.

To the Members of the Council:

Motion No. 32 (*Election of Members; applications Nos. 173–227 inclusive*) has received a majority of affirmative votes.

Motion No. 33 (*Vacancy in Commission on Proprietary Medicines*). Moved by H. M. Whelpley, seconded by W. B. Day, that Samuel C. Henry, of Philadelphia, be elected to fill the vacancy in the Commission on Proprietary Medicines caused by the death of the late Thomas F. Main.

Motion No. 34 (*Vacancy in Committee on Transportation*). Moved by H. V. Arny, seconded by E. G. Eberle, that Caswell A. Mayo, of New York, be elected to fill the vacancy in the Committee on Transportation, as a member and chairman, caused by the death of the late Thomas F. Main.

Motion No. 35 (*Election of Members*). *The following applications have been presented:*

No. 228. Mr. Joseph J. Miller, 525 3rd Ave., Pittsburgh, Pa., rec. by J. A. Koch and E. G. Eberle.

No. 229. Mr. Bernard M. Keene, 201 N. Delaware Indianapolis, Ind., rec. by F. W. Meissner and E. W. Stucky.

No. 230. Mr. Frank B. Meyer, 848 Broadway, Gary, Ind., rec. by F. W. Meissner and W. H. Rudder.

No. 231. Dr. David Elias Morgan, Phoenix City, Ala., rec. by Carl Wharton and W. S. Vance.

No. 232. Mr. Charles Robert Walker, Ensley, Ala., rec. by L. C. Lewis and W. P. Thomason.

No. 233. Mr. S. L. Toomer, Auburn, Ala., rec. by L. C. Lewis and W. P. Thomason.

No. 234. Mr. J. F. Spearman, Anniston, Ala., rec. by L. C. Lewis and W. P. Thomason.

No. 235. Mr. E. E. Cale, Ensley, Ala., rec. by L. C. Lewis and W. P. Thomason.

No. 236. Mr. Albert L. Schuhl, 1406 No. 33rd St., Omaha, Nebr., rec. by H. C. Newton and L. A. Johnson.

No. 237. Mr. Joseph C. Piercy, Tonapah, Nevada, rec. by H. C. Christensen and Wm. B. Day.

No. 238. Mr. Archie R. Crews, 307 11th St., Ballinger, Texas, rec. by E. G. Eberle and John A. Weeks.

No. 239. Mr. Rudolph Johannes Schobert, 2036 Pierce Ave., Chicago, Ill., rec. by Wm. B. Day and E. N. Gathercoal.

J. W. ENGLAND,
Secretary of the Council.
415 N. 33RD STREET.

PROGRAM FOR INDIANAPOLIS MEETING.

Monday, August 27.

9.30 A.M. National Association Boards of Pharmacy.
2.00 P.M. National Association Boards of Pharmacy.
8.00 P.M. National Association Boards of Pharmacy. American Conference of Pharmaceutical Faculties.

Tuesday, August 28.

9.30 A.M. National Association Boards of Pharmacy. American Conference of Pharmaceutical Faculties.
2.00 P.M. American Conference of Pharmaceutical Faculties. Joint Meeting of A. C. P. F. and N. A. B. P. Excursions to Industrial Plants.
7.00 P.M. Meeting of the Council.
8.00 P.M. First General Session. Meeting of Committee on Nominations.

Wednesday, August 29.

9.30 A.M. Scientific Section. Commercial Section. Women's Section.
2.00 P.M. Practical Pharmacy and Dispensing (Pharmacopoeias, Formularies and Standards). Section on Education and Legislation.
2.30 P.M. Musicale for Ladies, Claypool Hotel.
4.00 P.M. House of Delegates.
7.00 P.M. Meeting of the Council.
8.30 P.M. President's Reception. Riley Room, Claypool Hotel.

Thursday, August 30.

9.00 A.M. Automobile Ride for Ladies.
9.30 A.M. Scientific Section. Commercial Section. Practical Pharmacy and Dispensing (Pharmacopoeias, Formularies and Standards).
12.30 P.M. Luncheons of College Alumni.
1.00 P.M. Luncheon for Ladies, Claypool Hotel.
2.30 P.M. Second General Session.
4.00 P.M. House of Delegates.
7.00 P.M. Meeting of the Council.
8.00 P.M. Visit to the Laboratories of Eli Lilly & Co.

Friday, August 31.

9.30 A.M. Scientific Section. Section on Education and Legislation. Historical Section.
2.00 P.M. Practical Pharmacy and Dispensing (Pharmacopoeias, Formularies and Standards). Women's Section. Joint Session of Section on Education and Legislation, A. C. P. F. and N. A. B. P.
4.00 P.M. Meeting of the Council (Reorganization).
8.00 P.M. Entertainment for Entire Association.

Saturday, September 1.

9.00 A.M. Meeting of the Council.
10.00 A.M. Final General Session.

Members should at once obtain information relative to Transportation Rates from their local R. R. ticket agents.

INDIANAPOLIS HOTELS.

CLAYPOOL HOTEL—HEADQUARTERS.

One Person.

Room with detached bath	$1.50
Room with private bath	2.00

Two Persons.

Room with detached bath	$3.00 to $5.00
Room with private bath	4.00 to 8.00

Two connecting rooms with bath.

Two persons	$5.00 to $8.00
Four persons	7.00 to 12.00

Other excellent hotels for those who, for any reason, do not care to stop at headquarters, are: The Severin, the Washington and the Denison. The rates at these hostelries will be the same as those at the Claypool Hotel. All three are within two minutes' walk of headquarters.

Good accommodations can also be had at several other hotels within a short walk of the Claypool. Rates of $1.00 a day and upward have been secured at the Colonial, the English, the Grand, the Edward, the Linden, and the Oneida.

The Puritan and the Williams, two recent additions to the Indianapolis hotels, while more remote than those previously mentioned, are moderate in price and the accommodations excellent.

LOCAL COMMITTEES.

General Committee.

F. E. Bibbins, *Local Secretary;* C. W. Watkins, J. G. Mueller, W. F. Werner, A. D. Thorburn, F. R. Eldred, F. H. Carter, C. B. Jordan, E. G. Eberhardt.

Registration.

C. W. Watkins, *Chairman;* A. J. Holmes and A. F. Brown.

Finance.

J. G. Mueller, *Chairman;* C. J. Lynn and E. W. Stucky.

Hotel.

F. H. Carter, *Chairman;* August Kassulke and R. P. Blodau.

Publicity.

A. D. Thorburn, *Chairman;* H. S. Noel, E. B. Carter and C. B. Jordan.

Entertainment.

F. R. Eldred, *Chairman;* M. P. Schwartz, H. J. Borst, F. B. Fisk, W. A. Caperton, R. P. Blodau, H. W. S. Carter, J. W. Stokes and H. W. Rhodehamel.

Historical Exhibit.

E. G. Eberhardt, *Chairman;* J. H. Hurty and F. A. Federer.

Reception.

W. F. Werner, *Chairman;* L. E. Kline, E. H. Niles, C. R. Eckler, R. W. Showalter, W. J. Mooney, I. L. Miller, J. K. Lilly, Henry Huder, Cortice M. Warner, Theophilus Zimmerman, E. W. May, A. E. Denison, A. F. Sala, W. J. Gift, Burton Cassady and W. C. Bartholomew.

Ladies' Reception Committee.

Mrs. J. W. Stokes, *Chairman.*

Mrs. W. C. Bartholomew	Mrs. H. S. Noel
Mrs. F. E. Bibbins	Mrs. E. W. Stucky
Mrs. H. J. Borst	Mrs. A. D. Thorburn
Mrs. F. H. Carter	Mrs. C. W. Watkins
Mrs. F. R. Eldred	Mrs. G. D. Timmons
Mrs. F. B. Fisk	Mrs. F. W. Meissner
Mrs. J. G. Mueller	Mrs. J. K. Lilly
Mrs. M. P. Schwartz	Mrs. Eli Lilly

TENTATIVE PROGRAMS OF HOUSE OF DELEGATES AND SECTIONS OF THE AMERICAN PHARMACEUTICAL ASSOCIATIONS.*

House of Delegates, A. Ph. A.

Officers: *Chairman,* J. H. Beal; *First Vice-Chairman,* S. C. Henry; *Second Vice-Chairman,* O. F. Claus; *Secretary,* Jeannot Hostmann.

Sessions: Wednesday, August 29, 4.00 P.M.; Thursday, August 30, 4.00 P.M.

Program.

SCIENTIFIC SECTION.

Officers: *Chairman,* J. L. Turner; *First Vice-Chairman,* B. L. Murray; *Second Vice-Chairman,* A. W. Linton; *Secretary,* W. W. Stockberger.

Sessions: Wednesday, August 29, 9.30 A.M.; Thursday, August 30, 9.30 A.M.; Friday, August 31, 930 A.M.

Program.

1. "Magnesium Sulphate.....Jacob Diner
2. "Drug Cultivation" (illustrated with lantern slides).....John A. Borneman
3. "Microchemistry of the Alkaloids of *Datura Stramonium*".....Chas. O. Lee
4. "The Analysis of Borax Soaps for the Borax Content"..K. F. Ehmann and Joseph Harrison
5. "Borax and Boric Acid".....H. L. Harris
6. "Tolu and Sugar Coating in the Disguising of Medicines".....Bernard Fantus
7. "Solubility of Phosphatic Kidney Stones.....W. F. Rudd and E. V. Greever
8. "Standardization of Digitalis".....H. C. Colson, Jr.
9. "Tincture of Cantharides".....W. L. Scoville
10. "The Constituents of Senna Beans".....W. L. Scoville
11. "The Significance of Cretinin and Its Colorimetric Determination in Urine"..W. F. Gidley
12. "Biological Products from the Pharmacy Point of View".....L. E. Sayre
13. "Scientific Drug Farming" (illustrated with motion pictures).....H. C. Fuller
14. "Symposium on Drug Plant Growing".....
    W. W. Stockberger, Edward Kremers, E. L. Newcomb, H. C. Fuller, and others
15. "Soy Bean Oil".....E. V. Howell
16. "The Inversion of Sugar in U. S. P. Syrup".....G. W. Lloyd Plette
17. "The Microanalysis of Malted Milks".....C. W. Ballard

*The programs have not been completed and include only copy that reached the JOURNAL office prior to August 4. The officers of the House of Delegates and Sections are requested to send completed programs, arranged as they desire the subjects listed, to the Editor of the JOURNAL A. PH. A., 253 Bourse Building, not later than August 18, so the Official Program may be prepared in advance of the meeting in Indianapolis. Those who will have papers and have not advised the chairmen, should do so at once.

SECTION ON PRACTICAL PHARMACY AND DISPENSING.

(Pharmacopoeias, Formularies and Standards.)

Officers: *Chairman*, W. H. Glover; *Secretary*, David Stolz; *Associates*, Mrs. St. Clair R. Gay and Charles W. Holzhauer, Jr.

Sessions: Wednesday, August 29, 2.00 P.M.; Thursday, August 30, 9.30 A.M.; Friday, August 31, 2.00 P.M.

Program

SECTION ON EDUCATION AND LEGISLATION.

Officers: *Chairman*, R. A. Kuever; *Secretary*, C. B. Jordan; *Associates*, H. V. Arny, Arthur W. Linton and John Culley.

Sessions: Wednesday, August 29, 2.00 P.M.; Friday, August 31, 9.30 A.M. and 2.00 P.M.

Tentative Program.

Wednesday, 2 O'clock—First Session.

1. Address of the Chairman.....R. A. Kuever
2. Report of the Secretary.....C. B. Jordan
3. Report of the Committee on Patents and Trade Marks.....F. E. Stewart, *Chairman*
4. Report of the Committee on Drug Reform.....L. E. Sayre, *Chairman*
5. Report of the Committee on National Legislation.....John C. Wallace, *Chairman*
6. Report of the Committee on Regulation for the Transportation of Drugs by Mail.....Benj. L. Murray, *Chairman*
7. "Iowa's Prerequisite Law".....J. M. Lindly
8. "The State Legislature".....W. H. Cousins
9. "Graduate Pharmaceutical Work".....Edward Kremers
10. Nomination of officers.

Friday, 9.30 O'clock—Second Session.

1. "What Compulsory Health Insurance Will Mean to the Druggist"....Harry B. Mason
2. "Privately Owned Schools and Colleges of Pharmacy".....Edward Spease
3. Some Ideas about the Teaching of Practical Pharmacy".....Zada M. Cooper
4. "The School of Pharmacy and the Profession".....C. F. Nelson
5. "Pharmaceutical Journals.....Robert P. Fischelis
6. A Paper.....Anna G. Bagley
7. A Paper.....F. W. Nitardy
8. Report on the Work of the Voluntary Conference for the Drafting of Modern Laws Pertaining to Pharmacy.....Frank H. Freericks, *Chairman*
9. Further Nomination and Election of Officers.

Friday, 2.00 O'Clock—Third Session.

Joint Session of the Section with the American Conference of Pharmaceutical Faculties and the National Association of Boards of Pharmacy.

Rufus A. Lyman, President American Conference of Pharmaceutical Faculties; Lawrence C. Lewis, President National Association of Boards of Pharmacy.

1. Report of the Eighteenth Annual Meeting of the American Conference of Pharmaceutical Faculties, by its Secretary.....Wilber J. Teeters
2. Report of the Thirteenth Annual Meeting of the National Association of Boards of Pharmacy, by its Secretary.....H. C. Christensen
3. Presentation of Resolutions adopted by the A. C. P. F. and N. A. B. P. for Discussion
4. "Fallacies in Popular Psychology of Salesmanship".....Chas. O. Lee
5. "Are Colleges of Pharmacy Devoting Sufficient Time to Prescription Laboratory Practice?".....A. W. Linton

6. A Paper.....Chas. E. Mollet
7. "Military Recognition of the Pharmacist".....L. E. Sayre
8. "Pharmacology and the Recognition of Professional Pharmacy by the United States Government".....F. E. Stewart
9. "The U. S. P. IX and N. F. IV as Text Books for Pharmacognosy".....W. F. Gidley
10. "Further Reports and Discussion on the Work of the Voluntary Conference for the Drafting of Modern Laws Pertaining to Pharmacy".....Frank H. Freericks, *Chairman*

SECTION ON COMMERCIAL INTERESTS.

Officers: *Chairman*, P. Henry Utech; *Secretary*, Robert F. Pischelis; *Associates*, A. H. Ackermann, S. K. Sass and J. H. Webster.

Sessions: Wednesday, August 29, 9.30 A.M.; Thursday, August 30, 9.30 A.M.

Program.

1. Address of Chairman.....P. Henry Utech
2. "Net Profits and the Average Sale".....Clyde L. Eddy
3. "Commercial Possibilities in Professional Pharmacy".....Henry Kraemer
4. "Various Phases of Drug Store Publicity".....H. S. Noel
5. "The Preceptor—An Asset or a Liability".....F. M. Apple
6. "Capitalize Your Responsibility".....J. C. Peacock
7. "More Profits within Your Reach".....W. W. Figgis
8. "Commercial Pharmacy at College and at the Store".....Robert P. Fischelis

SECTION ON HISTORICAL PHARMACY.

Officers: *Chairman*, W. L. DuBois; *Secretary*, L. E. Sayre; *Historian*, E. G. Eberle.

Session: Friday, August 31, 9.30 A.M.

Program.

1. Address of the Chairman.....W. L. DuBois
2. "Eli Lilly, His Relations to Historical Pharmacy in the State of Indiana".....J. K. Lilly
3. "Historical Pharmacy of Indianapolis".....Frank H. Carter
4. "History of American Ginseng".....Edward Kremers
5. "History of New Jersey Pharmaceutical Association (for the Year of 1916).....Edward A. Sayre
6. "Chicago Veteran Druggists' Association".....Wilhelm Bodemann
7. "Antique Mortars".....Caswell A. Mayo
8. "Observations and Experiences in Pharmacy Extending over Sixty Years".....John F. Hancock
9. "Sketch of Maryland College of Pharmacy Since the Incorporation in 1841".....John F. Hancock
10. "Purdue University School of Pharmacy".....W. F. Gidley

WOMEN'S SECTION.

Officers: *President*, Mrs. E. A. Ruddiman; *Honorary President*, Mrs. John F. Hancock; *First Vice-President*, Mrs. E. Fine; *Second Vice-President*, Mrs. G. M. Beringer; *Third Vice-President*, Mrs. Fletcher Howard; *Secretary*, Mrs. Jean McKee Kenaston; *Treasurer*, Mrs. Franklin Apple; *Historian*, Miss Bertha Ott; *Chairman of Executive Committee*, Mrs. G. D. Timmons.

Sessions: Wednesday, August 29, 9.30 A.M.; Friday, August 31, 2.00 P.M.

Program.

1. "Teaching the Public".....Miss Zada Cooper
2. "Chemistry of the Household".....Miss Mary Creighton
3. "Problems in the Druggist's Home".....Mrs. W. B. Philip
4. "Some Social Service Aspects of the Hospital".....Miss Bertha Ott
5. "How Pharmacists' Wives May be of Service to Their Country"..Mrs. David F. Jones
6. A Talk.....Dr. H. V. Arny

COMMITTEE REPORTS

REPORT OF THE TREASURER OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

JANUARY 1, 1916, TO JANUARY 1, 1917.

Receipts.

Cash on hand, January 1, 1916			$87.25
Annual dues and Journal 1913 (Jan. 1, 1913 to Dec. 31, 1913)	$ 5.00		
Annual dues and Journal 1914 (Jan. 1, 1914 to Dec. 31, 1914)	25.00		
Annual dues and Journal 1915 (Jan. 1, 1915 to Dec. 31, 1915)	405.00		
Annual dues and Journal 1916 (Jan. 1, 1916 to Dec. 31, 1916)	9060.00		
Annual dues and Journal 1917 (Jan. 1, 1917 to Dec. 31, 1917)	2120.00		
Annual dues and Journal 1918 (Jan. 1, 1918 to Dec. 31, 1918)	10.00	$11625.00	
Dues only of the A. Ph. A. (Jan. 1, 1916 to Dec. 31, 1916)		52.00	
Miscellaneous dues of the A. Ph. A		8.75	
Sale of 2 parchment certificates of membership at $5.00	10.00		
Sale of 5 paper certificates of membership at $3.00	15.00	25.00	
Sale of Year Book and Proceedings		70.85	
Journal Advertisements		5122.04	
Journal Subscriptions		247.64	
Postage		.50	
Bank Exchange paid with dues		.89	
Sale of Badges and Bars		21.45	
Reprints from A. PH. A. JOURNAL		8.00	
Sale of 19 Gold Membership Buttons at $1.00	19.00		
Sale of 23 plated Membership Buttons at 25 cents	5.75		
Sale of 11 Gold Membership Pins at $1.00	11.00		
Sale of 10 Plated Membership Pins at 25 cents	2.50	38.25	
Interests on St. Louis Bonds in Current Fund	400.00		
Interests on deposit in International Bank of St. Louis	148.75	548.75	$17769.12
National Formulary III and IV			29700.33
Life Membership Fee		25.00	
Life Membership Fund (Interest on Massachusetts State Bonds)	390.00		
Centennial Fund (interests on Massachusetts State Bonds)	30.00	420.00	
Interest on Funds in International Bank of St. Louis from January 1, 1916, to December 31, 1916.			
Ebert Legacy Fund	140.15		
Procter Monument Fund	470.18		
Rice Memorial Fund	2.60	612.93	
Interest on Funds in Boston Penny Savings Bank from January 1, 1916 to December 31, 1916.			
Life Membership Fund	333.38		
Ebert Prize Fund	43.78		
Centennial Fund	74.98		
Endowment Fund	254.84		
College Prize Fund	1.46	708.44	$ 1766.37
Total			49323.07

Disbursements by Voucher Checks.

Jan.	3.	Check 2632	Wm. B. Day, salaries	$375.00
"	5.	" 2637	Louis C. Hesse, printing, postage and stationery	4.75

Jan.	5.	"	2638	Wm. B. Day, printing, postage and stationery	$ 32.00	
				Clerical	40.00	
				National Formulary III	3.56	
				Freight, express and drayage	2.46	
				Badges and bars	.14	
				Journal for Reporters on Progress of Pharmacy	3.12	81.28
"	5.	"	2639	W. T. Robinson, membership		22.00
"	7.	"	2640	National Drug Trade Conference		
				Chas. M. Woodruff, Secy.-Treas., Drug Trade Conference		50.00
"	7.	"	2641	Clarissa M. Roehr, Secy.-Treas., membership		16.00
"	10.	"	2642	E. G. Eberle, salaries		291.67
"	10.	"	2643	E. G. Eberle		
				Journal (*a*)	12.25	
				" (*b*)	60.00	
				" (*c*)	15.48	
				" (*d*)	15.28	103.01
"	10.	"	2644	Stoneman Press Co., Journal (*a*)		481.10
"	12.	"	2645	H. M. Whelpley, salaries		500.00
"	17.	"	2646	Louis C. Hesse, printing, postage and stationery		3.25
"	17.	"	2647	J. B. Lippincott Co., National Formulary III		11.25
"	17.	"	2648	John C. Wallace, Nat'l Drug Trade Conference		49.18
"	17.	"	2649	W. T. Robinson, printing, postage and stationery		11.00
"	17.	"	2650	H. M. Whelpley, printing, postage and stationery	88.30	
				Miscellaneous	6.40	94.70
"	19.	"	2651	J. H. Beal, printing, postage and stationery		4.50
"	19.	"	2652	Julius A. Koch, salaries (Sept. 1 to Dec. 31, 1915)		200.00
"	20.	"	2653	E. F. Greathead, printing, postage and stationery		3.75
"	20.	"	2654	Buxton & Skinner, printing, postage and stationery		2.00
"	31.	"	2655	Louis C. Hesse, printing, postage and stationery		8.50
Feb.	3.	"	2656	Wm. B. Day, printing, postage and stationery	5.00	
				Clerical	32.00	
				Miscellaneous	3.50	
				Membership	11.88	
				Year Book	.33	
				Journal for Reporter on Progress of Pharmacy	4.80	
				National Formulary III	2.22	59.73
"	9.	"	2657	Louis C. Hesse, printing, postage and stationery		4.50
"	11.	"	2658	W. T. Robinson, membership		22.00
"	17.	"	2659	E. G. Eberle, salaries		291.67
"	17.	"	2660	E. G. Eberle		
				Journal (*a*)	2.00	
				" (*b*)	60.00	
				" (*c*)	24.97	
				" (*d*)	14.50	101.47
"	17.	"	2661	Stoneman Press Co., Journal (*a*)		7.75
"	17.	"	2662	J. B. Lippincott, Journal (*a*)		423.33
"	17.	"	2663	E. F. Greathead, printing, postage and stationery		11.90
"	17.	"	2664	Anna G. Bagley, Women's Section, A. Ph. A.		3.96
"	21.	"	2665	Humble Letter Service, membership		3.00
"	28.	"	2666	W. T. Robinson, printing, postage and stationery		2.50
Mar.	8.	"	2667	Hieronimes A. Herold, National Formulary		6.00
"	8.	"	2668	Buxton & Skinner, printing, postage and stationery		1.75
"	8.	"	2669	Wm. B. Day, clerical	32.00	
				Miscellaneous	.20	
				Membership	10.00	

				Year Book	.99	
				Journal for Reporters on Progress of Pharmacy	12.04	
				National Formulary III	2.76	57.99
Mar.	10.	"	2670	W. T. Robinson, Year Book, Vol. 3		3.50
"	14.	"	2671	E. G. Eberle, salaries		291.67
"	14.	"	2672	Louis C. Hesse, printing, postage and stationery		12.90
"	14.	"	2673	J. B. Lippincott Co., Journal (*a*)		358.16
"	14.	"	2674	E. G. Eberle		
				Journal (*a*)	9.54	
				" (*b*)	60.00	
				" (*c*)	17.41	
				" (*d*)	7.13	94.08
"	14.	"	2675	Reeves Printing Co., membership		13.85
"	24.	"	2676	Noble & Seely, membership		8.00
"	24.	"	2677	Wickersham Printing Co, National Formulary III		80.00
"	24.	"	2678	Wickersham Printing Co., National Formulary III		12.86
"	30.	"	2679	Seidel Printing Co., Section on Scientific Papers		7.00
"	31.	"	2680	W. T. Robinson, printing, postage and stationery		3.00
Apr.	1.	"	2681	Denver Branch A. Ph. A., membership		4.00
"	6.	"	2682	Wm. B. Day, clerical	40.00	
				Miscellaneous	5.67	
				Membership	.54	
				Year Book, Vol. 3	.49	
				National Formulary III	3.08	49.78
"	6.	"	2683	H. M. Whelpley, printing, postage and stationery	66.65	
				Miscellaneous	20.67	87.32
"	10.	"	2684	W. T. Robinson, printing, postage and stationery		3.00
"	14.	"	2685	Theo. C. Hagenow (Treas. St. Louis Branch) membership		5.00
"	17.	"	2686	J. B. Lippincott Co., Women's Section A. Ph. A	12.89	
				Journal (*a*)	2.68	15.57
"	17.	"	2687	E. F. Greathead, printing, postage and stationery		11.90
"	17.	"	2688	E. G. Eberle, salaries		291.67
"	17.	"	2689	J. B. Lippincott		
				Journal (*a*)	372.71	
				" (*c*)	19.95	392.66
"	17.	"	2690	J. B. Lippincott Co., Journal (*c*)		3.72
"	17.	"	2691	E. G. Eberle		
				Journal (*a*)	11.38	
				" (*b*)	60.00	
				" (*c*)	21.75	93.13
"	25.	"	2692	W. T. Robinson, printing, postage and stationery		2.75
"	25.	"	2693	E. F. Greathead, printing, postage and stationery		6.90
"	25.	"	2694	Wm. C. Alpers, membership		30.00
"	25.	"	2695	J. W. England, printing, postage and stationery	29.13	
				Miscellaneous	1.86	30.99
"	25.	"	2696	Buxton & Skinner, printing, postage and stationery		1.75
May	4.	"	2697	J. B. Lippincott, printing, postage and stationery		3.78
"	4.	"	2698	Wm. B. Day, printing, postage and stationery	10.00	
				Clerical	32.00	
				Miscellaneous	.62	
				Membership	.32	
				Year Book, Vol. 3	.58	
				National Formulary III	2.29	45.81
"	6.	"	2699	Louis C. Hesse, printing, postage and stationery		4.25
"	17.	"	2700	E. G. Eberle, salaries		291.67

May	17.	"	2701	J. B. Lippincott Co.		
				Journal (*a*)	356.03	
				" (*c*)	19.57	375.60
"	17.	"	2702	E. G. Eberle		
				Journal (*a*)	15.57	
				" (*b*)	60.00	
				" (*c*)	10.00	
				" (*d*)	36.50	122.07
"	17.	"	2703	Lloyd Brothers, miscellaneous		188.74
"	17.	"	2704	Geo. M. Beringer, Com. on Unofficial Standards		30.92
"	17.	"	2705	Geo. Wirsing, printing, postage and stationery		9.50
June	20.	"	2706	Wm. B. Day, printing, postage and stationery	5.00	
				Clerical	32.00	
				Miscellaneous	.85	
				Year Book, Vol. 3	.85	
				National Formulary III	2.10	40.80
"	20.	"	2707	Louis C. Hesse, printing, postage and stationery		4.75
"	20.	"	2708	W. T. Robinson, printing, postage and stationery		2.75
"	20.	"	2709	E. F. Greathead, printing, postage and stationery		11.90
"	20.	"	2710	Reeves Printing Co., membership		2.75
"	20.	"	2711	Wm. C. Alpers, membership		15.00
"	20.	"	2712	J. B. Lippincott Co.		
				Journal (*a*)	336.71	
				" (*c*)	18.19	354.90
"	20.	"	2713	E. G. Eberle		
				Journal (*a*)	15.80	
				" (*b*)	33.75	
				" (*c*)	10.25	
				" (*d*)	6.42	66.22
"	20.	"	2714	E. G. Eberle, salaries		291.67
"	20.	"	2715	Buxton & Skinner, printing, postage and stationery		3.00
"	20.	"	2716	H. M. Whelpley, printing, postage and stationery	24.07	
				Miscellaneous	10.61	34.68
"	20.	"	2717	W. T. Robinson, printing, postage and stationery		12.00
"	20.	"	2718	D. L. Ward Co., recipe book		10.50
"	20.	"	2719	Louis C. Hesse, printing, postage and stationery		7.75
"	20.	"	2720	A. J. Eggers & Co., Sec. on Education and Leg		11.75
"	21.	"	2721	J. W. England, salaries		150.00
"	21.	"	2722	Wm. B. Day, salaries		375.00
"	21.	"	2723	J. A. Koch, salaries		300.00
"	21.	"	2724	Louis C. Hesse, printing, postage and stationery		3.00
"	21.	"	2725	H. K. Myers, National Formulary III		2.75
"	29.	"	2726	H. M. Whelpley, salaries		500.00
"	29.	"	2727	Wickersham Printing Co., Nat'l Formulary III		1.74
July	5.	"	2728	W. T. Robinson, printing, postage and stationery		7.50
"	8.	"	2729	J. H. Beal, printing, postage and stationery		5.00
"	11.	"	2730	Wm. B. Day, printing, postage and stationery	10.00	
				Clerical	32.00	
				Miscellaneous	.50	
				National Formulary III	1.09	
				Membership	.20	43.79
"	21.	"	2731	Louis C. Hesse, National Formulary IV		10.35
"	21.	"	2732	Stoneman Press Co., printing, postage and stationery		4.75
"	21.	"	2733	J. B. Lippincott Co.		
				Journal (*a*)	346.27	
				" (*c*)	17.87	364.14

July	21.	"	2734	E. G. Eberle		
				Journal (*a*)	2.50	
				" (*b*)	48.00	
				" (*c*)	20.00	
				" (*d*)	6.42	76.92
"	21.	"	2735	E. G. Eberle, salaries		291.67
"	21.	"	2736	Buxton & Skinner, printing, postage and stationery.		1.00
"	21.	"	2737	Phototype Engraving Co., National Formulary IV..		5.00
"	21.	"	2738	H. A. Dunning, National Formulary IV		8.00
"	21.	"	2739	H. M.Whelpley, printing, postage and stationery....	12.82	
				Miscellaneous	2.95	15.77
"	21.	"	2740	Louis C. Hesse, printing, postage and stationery....		22.50
"	25.	"	2741	W. T. Robinson, membership		11.50
"	28.	"	2742	E. F. Greathead, printing, postage and stationery...		11.90
"	28.	"	2743	Louis C. Hesse, National Formulary IV		10.35
Aug.	3.	"	2744	Louis C. Hesse, printing, postage and stationery....		4.00
"	3.	"	2745	Louis C. Hesse, printing, postage and stationery....		13.75
"	9.	"	2746	Louis C. Hesse, printing, postage and stationery....		3.00
"	9.	"	2747	W. T. Robinson, printing, postage and stationery...	3.00	
				Membership	12.50	15.50
"	9.	"	2748	Wm. B. Day, printing, postage and stationery	27.00	
				Clerical	32.00	
				Miscellaneous	.20	
				National Formulary III	.14	59.34
"	19.	"	2749	E. G. Eberle, salaries		291.67
"	19.	"	2750	J. B. Lippincott Co.		
				Journal (*a*)	325.66	
				" (*c*)	19.83	345.49
"	19.	"	2751	E. G. Eberle		
				Journal (*a*)	12.80	
				" (*b*)	33.00	
				" (*c*)	10.00	
				" (*d*)	6.42	62.22
"	19.	"	2752	C. Lewis Diehl, National Formulary IV		500.00
"	19.	"	2753	Louis C. Hesse, printing, postage and stationery....		4.00
"	19.	"	2754	H. M. Whelpley, printing, postage and stationery...	64.46	
				Miscellaneous	2.40	66.86
Sept.	18.	"	2755	A. H. Fetting, badges and bars		25.50
"	18.	"	2756	Wm. B. Day, clerical	40.00	
				Miscellaneous	1.89	41.89
"	18.	"	2757	P. H. Utech, membership		3.50
"	18.	"	2758	Whitehead & Hoag Co., badges and bars		18.88
"	18.	"	2759	Stoneman Press Co., printing, postage and stat'y...		22.75
"	18.	"	2760	Stoneman Press Co., printing, postage and stat'y...		10.25
"	18.	"	2761	C. Lewis Diehl, National Formulary IV		2.98
"	21.	"	2762	E. G. Eberle, salaries		291.67
"	21.	"	2763	J. W. England, printing, postage and stationery....	27.50	
				Miscellaneous	1.53	29.03
"	21.	"	2764	E. F. Greathead, printing, postage and stationery...		11.90
"	21.	"	2765	E. F. Greathead, printing, postage and stationery...		7.20
"	21.	"	2766	Wm. B. Day, traveling expenses		73.70
"	21.	"	2767	J. W. England, traveling expenses		17.00
"	21.	"	2768	Stoneman Press Co., Year Book		400.00
"	21.	"	2769	W. L. Scoville, Sec. on Scientific Papers		6.92
"	21.	"	2770	E. L. Newcomb, Sec. on Scientific Papers		6.35
"	27.	"	2771	Jos. Weinstein, Sec. on Prac. Pharm. & Dispensing..		18.60

Sept.	27.	"	2772	J. B. Lippincott & Co.		
				Journal (*a*)	357.82	
				" (*b*)	19.53	377.35
"	27.	"	2773	E. G. Eberle		
				Journal (*b*)	30.00	
				" (*c*)	10.10	
				" (*d*)	6.42	46.52
"	27.	"	2774	Chas. H. LaWall, National Formulary IV		3.60
"	27.	"	2775	Adam Wirth, National Formulary IV		2.68
"	27.	"	2776	W. L. Scoville, National Formulary IV		22.86
"	27.	"	2777	J. B. Lippincott Co., National Formulary IV		4148.82
"	28.	"	2778	H. M. Whelpley, traveling expenses		85.30
"	28.	"	2779	Stoneman Press Co., printing, postage and stationery		12.50
"	28.	"	2780	Louis C, Hesse, printing, postage and stationery		10.25
"	28.	"	2781	Louis C. Hesse, National Formulary IV		17.85
Oct.	5.	"	2782	Louis C. Hesse, printing, postage and stationery		3.25
"	5.	"	2783	Buxton & Skinner, printing, postage and stationery		1.50
"	5.	"	2784	Robt. S. Lehman, Sec. on Commercial Interests		25.00
"	5.	"	2785	L. H. Marvel, stenographers		350.00
"	11.	"	2786	Paul B. Hoeber, National Formulary III		34.80
"	11.	"	2787	Wm. B. Day, clerical	40.00	
				Printing, postage and stationery	.44	
				Miscellaneous	.61	
				Membership	.47	
				Year Book, Vol. 3	.27	41.79
"	16.	"	2788	E. G. Eberle, salaries		291.67
"	16.	"	2789	E. G. Eberle		
				Journal (*a*)	11.82	
				" (*b*)	36.00	
				" (*c*)	5.00	
				" (*d*)	15.42	
				Scientific Section	9.50	77.74
"	16.	"	2790	J. B. Lippincott Co.		
				Journal (*a*)	324.63	
				" (*b*)	20.82	345.45
"	16.	"	2791	J. B. Lippincott & Co., National Formulary IV		2517.75
"	16.	"	2792	Gast Bank Note Co., certificates		37.50
"	16.	"	2793	E. F. Greathead, printing, postage and stationery		6.90
"	16.	"	2794	Edward F. Whaley, printing, postage and stationery		11.00
"	16.	"	2795	E. N. Gathercoal, membership		23.00
"	20.	"	2796	O'Brien's Commercial Print Shop, Sect. on Education and Legislation		7.50
"	20.	"	2797	Fidelity & Deposit Co. of Maryland, Premium on Treas. Bond		37.50
"	20.	"	2798	T. J. Bradley, Treasurer's National Syllabus Committee		25.00
"	20.	"	2799	Edw. F. Whaley, printing, postage and stationery		18.50
"	20.	"	2800	Louis C. Hesse, printing, postage and stationery		3.25
"	20.	"	2801	J. B. Lippincott Co., National Formulary IV		12.24
Nov.	8.	"	2802	Wm. Gray, membership		5.00
"	8.	"	2803	W. T. Robinson, printing, postage and stationery		36.00
"	8.	"	2804	W. T. Robinson, printing, postage and stationery		5.50
"	8.	"	2805	Louis C. Hesse, printing, postage and stationery		5.75
"	8.	"	2806	Louis C. Hesse, printing, postage and stationery		4.25
"	8.	"	2807	F. E. Bibbins, membership		20.00
"	8.	"	2808	W. J. Teeters, membership		1.60

Nov.	8.	"	2809	Wm. B. Day, printing, postage and stationery	5.00	
				Clerical	32.00	
				Miscellaneous	.40	
				Year Book, Vol. 3	1.28	38.68
"	8.	"	2810	Title Guaranty Trust Co., miscellaneous		5.00
"	17.	"	2811	Mrs. F. M. Apple, Treas., membership		9.00
"	17.	"	2812	Wm. B. Day, printing, postage and stationery		74.00
"	20.	"	2813	Louis C. Hesse, printing, postage and stationery		3.25
"	20.	"	2814	J. H. Beal, printing, postage and stationery	10.75	
				Miscellaneous	5.00	15.75
"	20.	"	2815	W. T. Robinson, printing, postage and stationery		37.50
Nov.	20.	"	2816	E. G. Eberle, salaries		291.67
"	20.	"	2817	E. G. Eberle		
				Journal (*a*)	12.26	
				" (*b*)	20.00	
				" (*c*)	10.00	
				" (*d*)	6.42	48.68
Dec.	9.	"	2818	Louis C. Hesse, printing, postage and stationery	6.75	
				Printing, postage and stationery	1.75	8.50
"	9.	"	2819	J. B. Lippincott Co., National Formulary IV		3555.00
"	9.	"	2820	J. B. Lippincott Co., National Formulary IV		1249.25
"	9.	"	2821	J. B. Lippincott Co.		
				Journal (*a*)	417.66	
				" (*b*)	23.08	440.74
"	9.	"	2822	E. F. Greathead, printing, postage and stationery		11.90
"	9.	"	2823	J. B. Lippincott Co., National Formulary IV		59.16
"	9.	"	2824	John Uri Lloyd, Ebert Prize		40.00
"	9.	"	2825	Wm. B. Day, printing, postage and stationery	5.00	
				Clerical	40.00	
				Year Book, Vol. 3	1.19	46.19
"	13.	"	2826	W. T. Robinson, printing, postage and stationery		14.50
"	26.	"	2827	J. B. Lippincott Co.		
				Journal (*a*)	407.20	
				" (*c*)	23.25	430.45
"	26.	"	2828	E. G. Eberle		
				Journal (*a*)	5.77	
				" (*b*)	44.00	
				" (*c*)	5.00	
				" (*d*)	6.42	61.19
"	26.	"	2829	E. G. Eberle, salaries		291.65
"	26.	"	2830	Louis C. Hesse, printing, postage and stationery		1.75
"	26.	"	2831	Louis C. Hesse, printing, postage and stationery		6.50
"	26.	"	2832	J. W. England, salaries		150.00
"	26.	"	2833	Wm. B. Day, salaries		375.00
"	26.	"	2834	J. A. Koch, salaries		100.00
"	26.	"	2835	H. V. Arny, salaries		200.00
"	26.	"	2836	J. A. Koch, Year Book, Vol. 3		43.53
"	26.	"	2837	H. M. Whelpley, printing, postage and stationery	69.40	
				Salaries	500.00	
				Miscellaneous	16.53	585.93
"	26.	"	2838	S. G. Adams Stamp and Stationery Co., printing, postage and stationery		3.30
"	26.	"	2839	J. W. England, printing, postage and stationery		29.00
"	31.	"	2840	Louis C. Hesse, printing, postage and stationery		3.50
				Total amount disbursed by check		$28652.73
				Check returned (member deceased)		5.00
						$28657.73

Forward			$28657.73
Cash Received and Disbursed to Funds. January 1, 1916, to January 1, 1917.			
Centennial Fund (Interest on Mass. State Bonds)	$ 30.00		
Life Membership Fund (Int. on Mass. State Bonds)	390.00		
Ebert Legacy Fund (Int. on St. Louis Bonds)	80.00	$500.00	
International Bank of St. Louis (Interest on Funds).			
Procter Monument Fund (Time deposit Jan. 1, to June 30, '16)	87.58		
Procter Monument Fund	82.60		
Rice Memorial Fund	2.60		
Ebert Legacy Fund	60.15	232.93	
Boston Penny Savings Bank (Interest on Funds). January 1, 1916, to January 1, 1917.			
Life Membership Fund	333.38		
Ebert Prize Fund	43.78		
Centennial Fund	74.98		
Endowment Fund	254.84		
College Prize Fund	1.46	708.44	
Life Membership Fee	25.00		
Procter Monument Fund (Contribution J. K. Lilly)	300.00	325.00	$ 1766.37
Total amount of disbursements			$30424.10

SUMMARY OF DISBURSEMENTS. January 1, 1916, to January 1, 1917.

Salaries			$ 7225.02
Printing, postage and stationery			1100.65
Clerical expense, Secretary's office			424.00
National Formulary III			166.64
National Formulary IV			12133.37
Miscellaneous expenses			271.11
Stenographers for 1916 Annual Meeting			350.00
Traveling expenses for 1916 Annual Meeting			176.60
Committee on Membership			251.11
Committee on Unofficial Standards			30.92
Year Book, Vol. 3			453.01
Membership gold badges and bars			44.52
Certificates of Membership			37.50
Premium on Treasurer's bond			37.50
National Drug Trade Conference			99.18
Pharmaceutical Journals for Reporter on Progress of Pharmacy			19.96
Section on Scientific Papers			29.77
Section on Education and Legislation			19.25
Section on Commercial Interests			25.00
Section on Practical Pharmacy and Dispensing			18.60
National Syllabus Committee			25.00
Women's Section			16.85
Journal (*a*) Publication		4626.72	
Journal (*b*) Clerical		564.28	
Journal (*c*) printing, postage and stationery		344.34	
Journal (*d*) freight, drayage and miscellaneous		111.93	5647.27
Recipe book			10.50
Check returned (member deceased)			5.00
Ebert Prize to John Uri Lloyd			40.00
To Life Membership Fund			415.00
To Centennial Fund			30.00
To Procter Monument Fund			300.00

International Bank Interests from Jan. 1, 1916, to January 1, 1917.

To Ebert Legacy Fund	140.15	
To Procter Monument Fund	170.18	
To Rice Memorial Fund	2.60	312.93

Boston Penny Savings Bank Interests from Jan. 1, 1916, to January 1, 1917.

To College Prize Fund	1.46	
To Endowment Fund	254.84	
To Centennial Fund	74.98	
To Life Membership Fund	333.38	
To Ebert Prize Fund	43.78	708.44
Total amount of disbursements		$30424.10
To National Formulary IV		13903.67
Cash on hand, Jan. 1, 1917		4995.30
Total		$49323.07

American Pharmaceutical Association Expenditures and Appropriations. January 1, 1916, to January 1, 1917.

	Expenditures.	Appropriations.
Salaries	$ 7225.02	$ 6150.00
Printing, postage and stationery	1100.65	1000.00
Clerical expenses, Secretary's office	424.00	416.00
National Formulary III	166.64	1000.00
Miscellaneous expenses	278.59	300.00
Stenographers for 1916 Annual Meeting	350.00	350.00
Traveling expenses for 1916 Annual Meeting	176.00	200.00
Committee on Membership	251.11	250.00
Committee on Unofficial Standards	30.92	100.00
Year Book, Vol. 3	453.01	2500.00
Membership gold badges and bars	44.52	50.00
Certificates of Membership	37.50	50.00
Premium on Treasurer's Bond	37.50	50.00
National Drug Trade Conference	99.18	100.00
Pharmaceutical Journals for Reporter on Progress of Pharmacy	19.96	35.00
Section on Scientific Papers	29.77	25.00
Section on Education and Legislation	19.25	25.00
Section on Commercial Interests	25.00	25.00
Section on Practical Pharmacy and Dispensing	18.60	25.00
Section on Historical Pharmacy	....	25.00
National Syllabus Committee	25.00	25.00
Women's Section	16.85	25.00
Recipe book	10.50	50.00
Journal (*a*) Publication	4626.72	4500.00
Journal (*b*) Clerical	564.28	800.00
Journal (*c*) printing, postage and stationery	344.34	300.00
Journal (*d*) freight, drayage and miscellaneous	111.93	150.00
	$16486.84	$18526.00
Appropriations	$18526.00	
Expenditures	16486.84	
Unexpended balance	$2039.16	

The A. Ph. A. Permanent Funds, January 1, 1917.

	1916.	1917.	Increase.
Life Membership Fund	$21058.35	$21806.73	$ 748.38
Ebert Prize Fund	1084.26	1128.04	43.78
Centennial Fund	2941.13	3046.11	104.98
Endowment Fund	6308.45	6563.29	254.84
Ebert Legacy Fund	4012.05	4152.20	140.15
	$35404.24	$36696.37	$ 1292.13

Funds Held in Trust by A. Ph. A.

	1916.	1917.	Increase.
Procter Monument Fund	$ 7744.00	$ 8214.18	$ 470.18
Rice Memorial Fund	173.26	175.86	2.60
College Prize Fund	36.96	38.42	1.46
	$7954.22	$8428.46	$ 474.24

The Association Assets, January 1, 1917.

St. Louis City Bonds	$10000.00		
Cash in Bank, January 1, 1917	4995.30		
Available Assets		$14995.30	
National Formulary		13903.67	
Permanent Funds		36696.37	
Funds Held in Trust		8428.46	
Total A. Ph. A. Assets			$74023.80

DETAILED STATEMENT OF THE SEVERAL AMERICAN PHARMACEUTICAL ASSOCIATION FUNDS.

Life Membership Fund. (Established in 1870.)

Massachusetts 3% Registered State Bonds			$13000.00
On hand in Boston Penny Savings Bank, January 1, 1916		$ 8058.35	
Interest on deposit in Boston Penny Savings Bank, January 1, 1916, to December 31, 1916	333.38		
Interest on Massachusetts State Bonds, January 1, 1916, to December 31, 1916	390.00		
Life Membership Fee (Wilbur L. Scoville)	25.00	748.38	8806.73
Total on hand, January 1, 1917			$21806.73

Ebert Prize Fund. (Established 1873.)

On hand in Boston Penny Savings Bank, January 1, 1916			$ 1084.26
Interest on deposit in Boston Penny Savings Bank	$ 43.78		43.78
Total on hand, January 1, 1917			$ 1128.04

Centennial Fund. (Established 1877.)

Massachusetts 3% Registered Bonds			$ 1000.00
On hand in Boston Penny Savings Bank, January 1, 1916		$ 1941.13	
Interest on bonds, January 1, 1916, to December 31, 1916	$ 30.00		
Interest on deposit in Boston Penny Savings Bank, January 1, 1916, to December 31, 1916	74.98		
Deposited in Boston Penny Savings Bank, January 1, 1916, to December 31, 1916		$ 104.98	

Balance on hand in Boston Penny Savings Bank, January 1, 1917			$ 2046.11
Total on hand, January 1, 1917			$ 3046.11
Endowment Fund. (Established 1906.)			
On hand, January 1, 1916			$ 6308.45
Interest on deposit in Boston Penny Savings Bank, January 1, 1916, to December 31, 1916			254.84
Total on hand, January 1, 1917			$ 6563.29
Ebert Legacy Fund. (Established 1909.)			
St. Louis City registered 4% gold bonds			$ 2000.00
On hand in International Bank, January 1, 1916		$ 2012.05	
Interest on St. Louis Bonds	$ 80.00		
Interest on deposit in International Bank, January 1, 1916, to December 31, 1916	60.15		
Net Income		140.15	
Balance on hand in International Bank, January 1, 1917			2152.20
Total on hand, January 1, 1917			$ 4152.20
Procter Monument Fund. (Established 1904.) (Held in Trust.)			
On time deposit in International Bank of St. Louis, January 1, 1916		$ 5004.96	
Interest on time deposit at 4%, January 1, 1916, to December 31, 1916		87.58	
Certificate of deposit No. 63,008 International Bank of St. Louis			$ 5092.54
Deposit in International Bank of St. Louis, January 1, 1916		2739.04	
Interest on deposit in International Bank, January 1, 1916, to December 31, 1916		82.60	
Contribution (J. K. Lilly)		300.00	
Balance on hand in International Bank, January 1, 1917			3121.64
Total on hand, January 1, 1917			$ 8214.18
College Prize Fund. (Established 1905.) (Held in Trust.)			
On hand, January 1, 1916			$ 36.96
Interest on deposit in Boston Penny Savings Bank, January 1, 1916, to December 31, 1916			1.46
Total on hand, January 1, 1917			$ 38.42
Rice Memorial Fund (Transferred from U. S. P. C. in 1913). (Held in Trust.)			
On hand, January 1, 1916			$ 173.26
Interest on deposit in International Bank of St. Louis, January 1, 1916, to December 31, 1916			2.60
Total on hand, January 1, 1917			$ 175.86

HENRY M. WHELPLEY, *Treasurer.*

EDITORIAL NOTES

Editor: E. G. EBERLE, Bourse Building, Philadelphia, Pa.
Committee on Publication: J. W. ENGLAND, *Chairman;* G. M. BERINGER, CASWELL A. MAYO, H. B. MASON, and the Editor-in-Chief of the JOURNAL, General Secretary, Treasurer and Reporter on the Progress of Pharmacy, *ex-officio.*
Office of Publication, 253 Bourse Building, Philadelphia, Pa.

SECTION 304 OF THE WAR REVENUE BILL.

In preparing drafts for revenue measures there is always a danger of exactions that presage for some an unintentional injustice, and this is undoubtedly the case in the amendment that was added to Section 304 of the Senate war revenue bill, providing not only a double tax on alcohol on hand when the law takes effect, but also upon alcohol, "*mixed or combined with any other article.*" The effect of the Act would be to require the manufacturer, as well as the retailer, to inventory the alcohol in preparations, like fluidextracts, etc., as a basis for paying the additional tax thereon, if in excess of 50 gallons, including unmixed alcohol.

Retroactive taxes almost invariably work a hardship, and in this instance, *i. e.*, if the measure, as amended, is enacted, it would financially embarrass many retail druggists and some of the wholesalers and manufacturers. This surely is not the intent of the Government; now is the time for federal coöperation with commercial enterprises; however limited the financial investment may be in small stores, they are large numerically, and their soundness means much to the Government, conscious that the end of the war is undetermined. The great, commendable effort of the United States should be marked by concentrated energy, but the net available money from the proposed taxation would not offset the financial distress that would be created by it, and, therefore, constitutes lost energy. It will require hours of labor to inventory the stocks of various alcoholics, and many additional Government employees to supervise this impracticable undertaking and thereafter considerable time to make the necessary calculations for actual alcoholic content.

Theoretically, tax on a salable article may accordingly advance its value to the owner, but in practice this does not hold good—trade conditions must be considered. A bank may be disposed to increase loans on that basis to some extent, but not commensurate with the tax. Again, the tax must be paid in cash: it is a proposition to pay this in a large sum and have it returned in small sales, covering an indefinite period.

Another point of view is this: the eagerness to tax alcohol is because of its consumption as a beverage, a luxury, but conditions now are different: alcoholic beverages will be taxed out of existence; prohibition already obtains over a large territory, and the proposed levy resolves itself largely into a taxation on medicinal products, and adds to the burdens of the sick.

While it is realized that the clause may be eliminated before the completion of the August JOURNAL, or the law enacted, the subject is one that should receive editorial consideration. By all means, druggists everywhere should raise the sale price of all taxable articles sufficiently so as to pass the payment of the taxes on to the consumer.

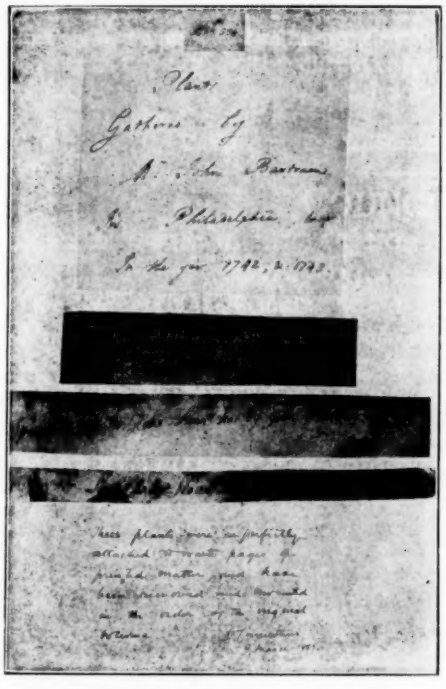
Largely through the efforts of the National Drug Trade Conference, in which the American Pharmaceutical Association holds membership, the objectionable clause referred to in the foregoing paragraphs has been eliminated. However, since then the Senate Finance Committee has agreed to raise the spirit tax to $3.20 per proof gallon, which is equivalent to $6.02 tax on a wine gallon of alcohol; therefore, a selling price of $7.00 or more per gallon must be expected. There are two points to be considered, one on the part of the Government. The purpose is to secure more revenue; the result will probably be the reverse. Manufacturers who have heretofore used alcohol as a solvent will use other solvents instead. The argument already made is also applicable: alcohol is necessary in pharmaceutical manufacture, and therefore the advanced cost must be paid by those needing medicines—the sick, the majority of whom can ill afford to do so.

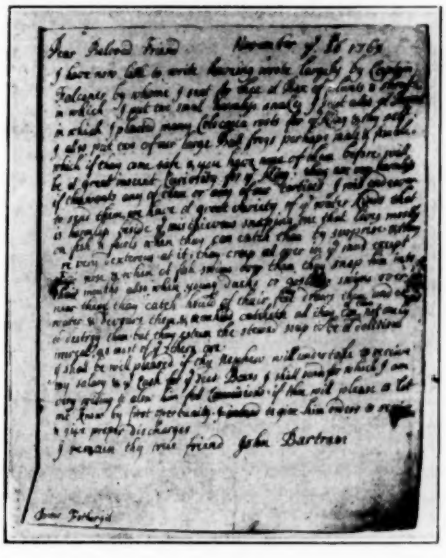
We have since received the following telegram from Mr. W. L. Crounse, attorney for N. W. D. A.: "Medicinal alcohol subject to tax of $2.20 per proof gallon, but not subject to additional tax of $1.00 applicable to beverage alcohol." The tax equivalent on a wine gallon of alcohol for pharmaceutical and medical uses is therefore $4.14.

ANNIVERSARY OF AN EVENT OF JULY 1767.

One hundred and fifty years ago, early in July 1767, Benjamin Franklin paid a visit to Peter Collinson, F. R. S., F. S. A., of London, England, the famous Quaker botanist. The anniversary of this occasion was celebrated last month, on the lawn of the celebrated Botanical Gardens, now Mill Hill School, London, under the historical trees planted by Linnaeus and other famous botanists of the eighteenth century, among which trees is a magnificent old cypress gathered by John Bartram, the founder of the first botanical garden in America (Philadelphia), and sent to Peter Collinson. Bartram's Garden still exists and has been partially restored; the purpose is to continue the work of restoration. We reproduce a picture of the Bartram cypress tree, a view of the Bartram home, still standing, also a photograph of a letter of John Bartram written to Dr. John Fothergill, of

This cut shows the Bartram Residence; adjoining is the Bartram Cypress. The cut below is a cover leaf of an herbarium folder, and adjoining is a reproduction of a letter by John Bartram to Doctor Fothergill.





London, and likewise a front leaf of an herbarium folder, and specimen. The wording of the plates is printed as per copies.

It was through Peter Collinson that the King appointed John Bartram botanist and naturalist for exploring the provinces. It was in pursuance of these duties that he explored Florida, and it was here that he found the stripling cypress which grew into the tree shown in the picture. It was killed by a bolt of lightning about twenty years ago; the height of the tree is about 175 feet.

Sir Hans Sloane, referred to on the herbarium sheet, was the founder of the British Museum.

John Bartram was born at Darby, near Philadelphia, March 23, 1699. He founded his botanical garden at Kingsessing (now part of Philadelphia), in 1728, and here he died September 22, 1777.

November ye 26th, 1769

Dear beloved friend:

I have now little to write haveing wrote largely by Captain Falconer by whome I sent for thee a Box of plants & shrubs in which I put two small harmless snakes. I sent allso a Barrel in which I planted many Colo casia roots for ye King & thy self I allso put two of our large Bull frogs perhaps male & female which if thay come safe & you have none of them before will be a great inocent curiosity for ye King, thay are very harmless if thee wants any of them or any of our tortises I will endeavor to send them, we have a great variety of ye water kinds that is harmless beside ye mischievous snaping one that lives mostly on fish & fowls when they can catch them by surprise & thay are very dexterous at it, thay creep all over in ye mud except thair nose & when a fish swims over them thay snap him into thair mouths allso when young ducks or goslings swims over near them thay catch hould of thair feet draws them under water & devours them & mankind catcheth all thay can of them not onely to destroy them but they esteem the stewed soup to be a delitious morcel as most of ye others are.

I shall be well pleased if thy Nephew will undertake to receive my salary & ye Cash for ye seed Boxes I shall send; for which I am very willing to alow him full Commissions if thee will please to let me know by first opertunity. I intend to give him orders to receive & give proper discharges.

I remain thy true friend John Bartram.

Doctor Fothergil

H S 334 1/2

Plants
Gathered by Mr. John Bartram
In Philadelphia, Pa.
In the years 1742, & 1743.

Specimens gath colected by John Bartram in ye year 1742 for Sir Hance Sloan

Specimens for Sir Hans Sloan Sent by John Bartram 1743 No. I

Specimens For Sir Hans Sloan Sent by John Bartram 1743 No. II.

These plants were imperfectly attached to waste pages of printed matter, and have been removed and mounted in the order of the original volume.

W. CARRUTHERS.

9 March 1888.

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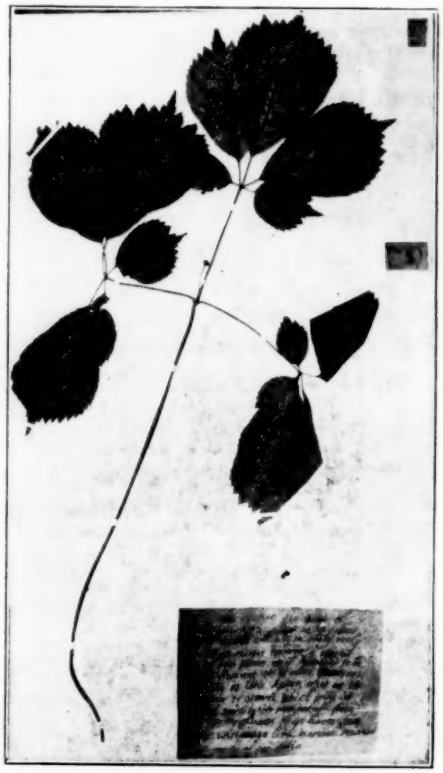
8 Panax quinquefolium Linn.

This is our gin seng a remarkable plant in its places of growth which is in shady rocky rich steep ridges towards ye sources of our rivers as if



designed to be hid from our use or abuse; its vertues being as little known to us as its places of growth which with its great scarcity, its remarkable form, its exceeding finnenness of its leaves, long life with its so little increase renders it worthy of our notice.

TRAINED MEN SHOULD NOT BE DRAFTED FOR UNTRAINED SERVICES.

General Crowder, chief of the Provost Marshall's Department, has decided not to turn enlisted medical students, and young doctors, over to the Surgeon General's office of the Army. There is here, as in a great many things, the ever-appearing reference to precedent, often accompanied by a fear that professional service will be given too much military rank.

The stand taken seems unjust to the men, the service and the profession. The visiting Chief Surgeon of the English Army has warned our own people against blunders that cost England dear, and we should profit by them.

Pharmacy has not been recognized at all professionally, and still pharmacists are required for professional services, evidencing both their need and value, without commensurate pay nor any military rank whatever. It was contemplated to continue on this basis, but we believe now, that Congress will recognize the injustice and that the medical profession will be more intensely impressed with the justice and merit of what pharmacists are asking for, and aid in the passage of H. R. 5531, which it is to be hoped will also find favor with the Surgeon General.

A related experience is sometimes more persuasive than direct argument.

Secretary of War, Newton Diehl Baker, was commencement orator at the University of North Carolina; Secretary Josephus Daniels also delivered a short address. President Graham announced the promotion of J. G. Beard from assistant professor to associate professor of pharmacy.

Herbert Carl Raubenheimer, son of Professor Raubenheimer, chairman of the Committee on the A. Ph. A. Recipe Book, graduated with honors from the Department of Pharmacy of the College of Jersey City and received several gold medals and special prizes.

Mrs. Wilbur L. Scoville, wife of Professor Scoville, acting chairman of the N. F. Committee, died July 16. Mrs. Scoville had been sick for more than a year, prior to her death.

Hon. George Washington Edmonds, Congressman from the Fourth District of Pennsylvania, has introduced a bill in Congress (H. R. 5531), providing for a Pharmaceutical Corps in the Army. While not now in the drug business, he is a graduate of the Philadelphia College of Pharmacy.

The Department of Justice has made the positive statement that court plaster, infected with tetanus germs, has been sold in the United States. Newspaper accounts report the sale of infected soap. This, however, has not been substantiated.

OBITUARY.

ROBERT H. LAND.

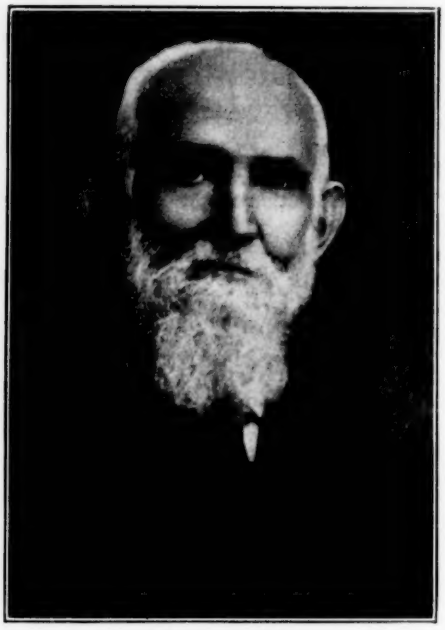
Lacking just a little of being 83 years of age, there passed on recently in Augusta, Georgia, after some sixty years of useful life in that city, Robert H. Land. (Mr. Land was born March 10, 1834, and died February 8, 1917.—EDITOR.)

Here was a man who seemed really to be the very incarnation of pharmacy; yet it is not certain but that his attainments in chemistry and botany were nowise less than in his chosen profession. It is doubtful indeed, if any man in the South Atlantic States was superior to Mr. Land in any one of these three sciences.

From the physical side, his life was no less remarkable. He was frail looking and slender, not weighing over 100 pounds, and still he had scarcely ever a day of illness in his life; he went through the Confederate War from '61 to '65, and then walked all the way back from the battlefield of Virginia to Augusta, safe and sound. He was engaged actively in the business of pharmacy and selling drugs from 1851 (less the days of the war) until several years ago. To the last he was full of cheerfulness, humor and good comradeship. He never lost his happy interest in life, and with full mentalities kept up his intense love for reading and studying.

In 1851 he was employed in the drug business of Dr. Pratt, Newberry, S. C. In 1861 he left Newberry for the army. During these ten years, with an able preceptor, plenty of books and the use of a well-equipped laboratory and an herbarium, he laid the foundation of his knowledge in botany, chemistry and pharmacy. He was, however, a student all of his life.

In 1865 he tramped back to Augusta and entered the drug business of Dr. W. H. Tutt, whose drug store perhaps, in those days



ROBERT H. LAND
(Member of the A. Ph. A. for 58 years)

was the finest of this section; in three years the firm was Tutt & Land. Later on he was the leading force in the drug house of Barrett & Land. These two firms were the largest drug firms in those days of the Southeast. He afterward carried on, in a more quiet way, a retail business in Augusta under his own name.

He was a life member of the American Pharmaceutical Association, joining in 1859. He was a charter member of the Georgia Pharmaceutical Association, and its third president.

At various times he did valuable work for the United States Pharmacopoeia and in earlier years was a frequent contributor to various drug journals.

He was remarkable for his keenness for scientific knowledge; for this he was always delving. The spirit of discovery was predominant in his mind. Through his proficiency in science he was enabled to be of great service and his reputation, especially in pharmacy, extended beyond his own section of the country. With him, a useful life passed out.

N. L. WILLET.

SOCIETIES AND COLLEGES.

LAST CALL FOR THE A. PH. A. MEETING.

On August 27th, Indianapolis will welcome the annual convention of the American Pharmaceutical Association. It is reported that plans have been made to entertain a record-breaking number at this meeting and from the information regarding the important features of this wartime convention it seems likely that the committees have been planning both wisely and well.

There has never been a time in the history of the parent association when pharmacy was so much in need of safe reasoning and careful planning as it is at the present time. It seems particularly fortunate that Indianapolis was chosen for the 1917 meeting as its central location makes it easy of access to all points of the country.

The Claypool Hotel will be used as headquarters. This hostelry is amply provided with convention halls and committee rooms and is ideally located for such gatherings as the A. Ph. A. meeting. The rates are from $1.50 to $5.00 a day for one person. Other excellent hotels are: The Severin, the Washington and the Denison, all centrally located and within a two minutes' walk of headquarters.

Rates from $1.00 a day and upward have been secured at the Colonial, the English, the Grand, the Edward, the Linden and the Oneida. The Puritan and the Williams, a trifle more remote from headquarters, are new, moderate in price, and offer excellent accommodations.

The National Association of Boards of Pharmacy will open the first business of the convention on Monday, August 27th and the American Conference of Pharmaceutical Faculties will also have the first business meeting on that day.

The first general session will convene on Tuesday, and on the succeeding days the regular sessions of the scientific, commercial, and women's sections will be held.

There will be an excursion to Indianapolis Industrial Plants on Tuesday afternoon, and

on Wednesday a musical will be given for the ladies. The President's reception will be held on Wednesday evening.

Thursday morning the ladies will be entertained with an automobile ride about the city. On returning the visiting ladies will be entertained at luncheon.

Arrangements have been made to inspect the Lilly Laboratories on Thursday evening and the Lilly Company will arrange to have the entire laboratory force on duty. This will make it possible for the members of the association to make this laboratory inspection without being absent from important business meetings.

After the sessions on Friday the entertainment committee will have a deep, dark secret to "spring." Just what the plans are no one seems to know but assurance is given that it will be a unique entertainment and one that will be heartily enjoyable for both sexes and young and old alike. It is said that this evening's fun will be the crowning entertainment feature of the convention.

It is not too late to plan to visit Indianapolis and attend this important meeting of the parent pharmaceutical association, and it is earnestly to be hoped that everyone who is interested in the welfare and betterment of his profession will make a strong endeavor to be present. —Publicity Committee.

NATIONAL PHARMACEUTICAL SERVICE ASSOCIATION.

Concerted action for securing commissioned rank for pharmacists in the Government service was taken at Philadelphia on the evening of June 26, 1917, when representatives of the Philadelphia Branch of the American Pharmaceutical Association, Philadelphia Association of Retail Druggists, Philadelphia Drug Exchange, and the Philadelphia College of Pharmacy met and formed a permanent organization for the express purpose of securing adequate recognition of all branches of pharmacy. Much progress has been made since the first meeting and it seems as though the fruits of the labor of those who have been charged with the work of this Association are about to be realized.

The permanent organization which was formed was called the National Pharmaceutical Service Association and the following officers and executive committee were elected: *President*, Geo. M. Beringer, Camden, N. J.; *Vice-President*, Charles H. LaWall, Philadelphia; *Secretary-Treasurer*, Robert P. Fischelis, Philadelphia; *Executive Committee*, Jos. W. England, Walter B. Smith, Ambrose Hunsberger, E. G. Eberle, Samuel C. Henry, J. C. Peacock, W. D. Robinson, F. E. Stewart, and the officers of the Association.

Copies of the constitution and by-laws of the newly formed Association and an announcement as to its objects have been mailed to quite a number of pharmacists in various sections of the United States, as it is the object to enlist as many members in the cause as possible so as to present a strong united front to the authorities.

On July 24, Surgeon-General Gorgas, of the United States Army, granted representatives of this Association an interview in his office in Washington. President Beringer, Jos. W. England, E. G. Eberle and S. L. Hilton represented the pharmacists on this occasion and the Surgeon-General appointed a committee of Army surgeons to carefully consider the matter presented. The pharmacists were asked to present their request in writing after the conference had been held, and careful consideration of their views was promised.

In the meantime, the Executive Committee of the National Pharmaceutical Service Association has drawn up a bill for presentation to Congress (H. R. 5531), authorizing the formation of a pharmaceutical corps in the Army, presided over by a major who must be a pharmacist, and other supporting officers who must likewise possess pharmaceutical qualification. The bill, if passed, will permit those now in the hospital corps who have had pharmaceutical training to rise to commissioned rank after a term of service and upon presenting proper qualifications.

It is to be hoped that the response to the request for more members who are willing to support this movement will be sufficiently great to carry on the work which is necessary to send this bill through Congress. The membership fee is only one dollar and should be remitted to Secretary Robert P. Fischelis, 828 N. 5th St., Philadelphia. It will be realized that for success there must be continued activity and the expenditure of considerable money for proper promotion. Therefore every pharmacist is requested to give not only his influence but financial assistance in this limited way, or by larger donation if he is so disposed. Coöperation is the thing.

The Association does not aim to displace any other organization of druggists or pharmacists but to coöperate with them, and their support is solicited for the specific objects of the Association. The general objects of the Association are: To assist in providing the best possible pharmaceutical service for the Government; to provide for supplies of dependable drugs and medicines; to advance the science and art of pharmacy in the U. S. Government service; to secure for pharmacy a recognition by the Government commensurate with its importance, and to improve the conditions of pharmaceutical practice in the Army, Navy and Public Health Service.

1. To modernize and develop the pharmaceutical service of the Government according to the most advanced professional standards.

2. To secure the establishment of a pharmaceutical corps in the U. S. Army and to provide commensurate rank for the professional services rendered by the enlisted pharmacists.

3. To improve the standing of pharmacists in the Navy.

4. To secure pharmaceutical representation on the Advisory Council to the Committee on National Defense.

5. To coöperate with the Government and the medical profession, both locally and nationally, in providing the best medical attention for those in the service whether in the fields or in hospitals.

AMERICAN CHEMICAL SOCIETY.

The September meeting of the American Chemical Society will be held in the buildings of the Massachusetts Institute of Technology, Charles River Road, Cambridge, Mass., September 11, 12 and 13, 1917. The Northeastern Section has been requested by the Directors to omit the usual annual banquet and excursions, and to arrange a program characterized by simplicity and seriousness, and bearing as fully as possible on questions concerning the activities of chemists—both in the government service and in the industries during the war.

The following Divisions of the Society and announcements of the program are of interest to pharmacists:

Division of Organic Chemistry will hear and discuss the report of the Committee on "The Supply of Organic Chemicals for Research during the War," by the Chairman, C. S. Hudson.

Division of Pharmaceutical Chemistry.—Conference on "Pharmaceutical Chemistry and the Future," opened by L. F. Kebler. The Secretary of the Division, Dr. Geo. D. Beal, calls the attention of the members to the fact that papers on the composition of plant drugs or any of their constituents, the composition of volatile oils, etc., are appropriate to the program of this division. Papers on pharmacological testing should also be presented to this division.

NATIONAL EXPOSITION OF CHEMICAL INDUSTRIES.

All things point to the Third National Exposition of Chemical Industries at the Grand Central Palace, New York, during the week of Sept. 24, being a much greater success than its predecessors, and will be the largest and most complete exposition of these industries ever held at any place in the world.

NEW OFFICERS OF STATE PHARMACEUTICAL ASSOCIATIONS.

ALABAMA.

Alabama Pharmaceutical Association met at Tuscaloosa, June 19–20. The following officers were elected: *President*, C. R. Walker, of Ensley; *Vice-Presidents*, J. F. Spearman, of Anniston, Luther Davis, of Tuscaloosa; *Treasurer*, S. M. Toomer, of Auburn; *Secretary*, W. E. Bingham, of Tuscaloosa; *Executive Committee*, J. H. Humphries, of Huntsville, Carl Wharton, of Gadsden, J. R. Edwards, of Anniston. Huntsville was selected for the next meeting place.

CONNECTICUT.

Connecticut Pharmaceutical Association convened at Morris Cove, June 20–21. One hundred dollars was voted by the Association for the Red Cross. Officers for the ensuing year were elected as follows: *President*, Carl S. Ramsey, New Britain; *Vice-Presidents*, E. T. Nolan, of Torrington, and C. T. Hull, New Haven; *Secretary-Treasurer*, P. J. Garvin, Bethel.

IDAHO.

Idaho Pharmaceutical Association convened at Guyer Hot Springs, Ketchum, July 11–12. Officers were elected as follows: *President*, A. E. Sutton, of Caldwell; *Vice-Presidents*, C. O. Ballou, of Boise, and A. B. Caldwell, of Twin Falls; *Secretary*, Vic Stolle, of Boise;

Treasurer, L. A. Harmon, of Caldwell. Next year's meeting will be held at Nampa, June 12 and 13.

KENTUCKY.

Kentucky Pharmaceutical Association held its fortieth annual meeting in Louisville, June 19–21. The following officers were elected for the ensuing year: *President*, W. B. Montgomery, Caneyville; *Secretary*, J. W. Gayle, Frankfort; *Treasurer*, Vernon Driskell, Carrollton; *Chairman Executive Committee*, Leon Abrahams, Louisville.

MAINE.

Maine Pharmaceutical Association held a business session in Portland, June 29. Officers were elected as follows: *President*, H. C. Buxton, of Fort Fairfield; *Vice-Presidents*, F. H. Neal, of Fairfield, E. F. Carswell, of Gorham, and Fred Cox, of Bath; *Secretary*, Dr. M. L. Porter, of Danforth; *Treasurer*, A. W. Meserve, of Kennebunk.

MARYLAND.

Maryland Pharmaceutical Association convened at Ocean City, July 9–13. A committee was appointed, consisting of Messrs. John B. Thomas, D. R. Millard, R. E. L. Williamson, Dr. Charles Caspari, Jr., James E. Hancock, and E. F. Kelly, to coöperate with the American Pharmaceutical Association in the effort to have a Pharmaceutical Corps established in the U. S. Army. Reasonable revision of the U. S. Patent Laws was advocated. The following officers were elected: *President*, Eugene W. Hodson, of Baltimore; *Vice-Presidents*, W. H. Clarke, of Pocomoke City, D. R. Millard, of Baltimore, and G. E. Pearce, of Frostburg; *Secretary*, E. F. Kelly, of Baltimore; *Treasurer*, Samuel Y. Harris, of Baltimore.

MASSACHUSETTS.

Massachusetts Pharmaceutical Association convened in annual session at the New Ocean House, Swampscott, June 19–21. Patriotism was evident, revision of U. S. Patent Laws was recommended, and the Scholarship in Massachusetts College of Pharmacy was continued. The following officers were elected: *President*, Walter S. Doane, of Worcester; *Vice-Presidents*, Clifford P. Thompson, of Springfield, Charles C. Hearne, of Springfield, and Alfred J. H. Paquette, of Lynn; *Secretary*, James F. Guerin, of Worcester; *Treasurer*, James F. Finneran, of Boston.

NEBRASKA.

Nebraska Pharmaceutical Association met at North Platte June 19–20. Prof. Henry Kraemer, of Philadelphia, Pa., was the guest of the Association and delivered an illustrated lecture on "Drug Plants." Dr. Barrowman, chemist at the State University, gave an illustrated lecture on "The Potash Industry of Western Nebraska." Officers were elected as follows: *President*, Neils Mikkelsen, of Kenesaw; *Vice-Presidents*, W. R. Wright, of Callaway, J. H. Stone, of North Platte, A. H. Brooke, of Hastings, William Milder, of Omaha, and Charles Rutherford, of Aurora; *Secretary*, J. G. McBride, of University Place; *Treasurer*, D. D. Adams, of Nehawka. Lincoln was selected as the meeting place for next year.

NEW HAMPSHIRE.

New Hampshire Pharmaceutical Association held its annual convention in Joliet Hall, Manchester, June 26. Officers for the ensuing years were elected as follows: *President*, William McCullis, Bristol; *Vice-Presidents*, A. E. Wallace, of Nashua, George F. Barbour, of Concord; *Secretary*, Eugene Sullivan, of Concord; *Treasurer*, S. Howard Bell, of Derry.

NORTH CAROLINA.

North Carolina Pharmaceutical Association convened at Asheville, June 19–21. The establishment of a Pharmaceutical Corps was advocated. The following officers were elected for the ensuing year: *President*, G. A. Matton, High Point; *Vice-Presidents*, S. E. Welfare, Winston-Salem, G. R. Pilkington, Pittsboro; E. E. Missildine, Tryon; *Secretary*, J. G. Beard, Chapel Hill; *Acting Treasurer*, J. G. Beard. Raleigh was selected as the next place of meeting.

OHIO.

Ohio Pharmaceutical Association convened at Cedar Point July 10–12. The efforts to establish a Pharmaceutical Corps in U. S. Army and to seek recognition for pharmacy on the Advisory Commission of the Council of National Defense were endorsed. Officers were elected as follows: *President*, E. H. Thiesing, of Cincinnati; *Vice-Presidents*, J. W. Dysle, of Marietta, and Charles Krone, of Hamilton; *Secretary*, T. D. Wetterstroem, of Cincinnati; *Treasurer*, L. W. Funk, of Columbus. An attempt will be made to hold the 1918 meeting on board a steamer en route to Mackinac.

OREGON.

Oregon Pharmaceutical Association met at Seaside July 10–13. Officers were elected for the ensuing year as follows: *President*, W. H. McMair, of Ashland; *Vice-Presidents*, H. F. Brandon, of Portland, E. A. Robinson, of Portland, and J. C. Perry of Salem; *Secretary*, A. W. Allen, of Portland; *Treasurer*, B. F. Jones, of Portland.

RHODE ISLAND.

Rhode Island Pharmaceutical Association met in semi-annual session at Lake Pearl, Wrentham, Mass, July 11.

UTAH.

Utah Pharmaceutical Association met at Salt Lake City, June 20–21. Two annual scholarships were provided for in the Department of Pharmacy, Utah University, one for women, the other for men. Officers were elected as follows: *President*, H. H. Peterson, of Richfield; *Vice-Presidents*, J. L. Boyden, of Coolville, and June Clark, of Ogden; *Secretary*, F. J. Folland, of Salt Lake City; *Treasurer*, John Culley, of Ogden. Provo was selected for the next place of meeting.

VERMONT.

Vermont Pharmaceutical Association at its 24th annual meeting at the Lake Dunmore Hotel, Salisbury, re-elected the officers, as follows: *President*, Fred. W. Churchill, of Proctor; *Vice-Presidents*, W. G. Sargent, of Brattleboro, F. L. Dutcherd, of St. Albans, Mrs. Ida B. Jones, of Johnson; *Secretary-Treasurer*, W. E. Terrill, of Burlington.

VIRGINIA.

Virginia Pharmaceutical Association held its thirty-sixth annual meeting at Old Point Comfort, July 10–12. Revision of the U. S. Patent Laws was endorsed and also the establishment of a Pharmaceutical Corps in U. S. Army. Officers were elected as follows: *President*, C. H. Goldsboro, of Culpeper; *Vice-Presidents*, G. E. Thompson, of Chatham, and D. E. Seagle, of Pulaski; *Secretary*, E. L. Brandis, of Richmond; *Treasurer*, W. F. Rudd, of Richmond; *Local Secretary*, C. D. Fox, of Roanoke; *Member of the Executive Committee*, W. G. Williams, of Charlotte Courthouse; *Member of the Entertainment Committee*, R. C. Davis, of Richmond. The 1918 meeting will be held at Natural Bridge.

WASHINGTON.

Washington Pharmaceutical Association convened at Spokane, June 14–16. Revision of U. S. Patent Laws was advocated and also recognition of the pharmacists' services by the Government. The officers elected are: *President*, H. G. Duerfeldt, of Spokane; *Vice-Presidents*, A. A. Tozer, of Everett, Mrs. Emily McRae, of Spokane, and G. C. Norton, of Tacoma; *Secretary*, G. Elmer Brown, of Spokane; *Treasurer*, G. A. Lukens, of Spokane.

WEST VIRGINIA.

West Virginia Pharmaceutical Association met at Deer Park, Md., June 19–20. Officers were elected as follows: *President*, O. O. Older, of Charleston; *Vice-Presidents*, Fred Allen, of Horton, and H. J. Haggerty, of Clarksburg; *Secretary*, A. B. Berry, of Morgantown; *Treasurer*, G. A. Bergy, of Morgantown. The next meeting will be held at Charleston, W. Va.

WISCONSIN.

Wisconsin Pharmaceutical Association met in Milwaukee, June 25–29. A Pharmaceutical Corps was endorsed and also recognition on the Advisory Commission. The work of the Department of Pharmacy of the State University was heartily endorsed. Dr. Edward Kremers made a plea for a Pharmacal Research Bureau. Officers were elected as follows: *President*, J. J. Possehl, of Milwaukee; *Vice-Presidents*, B. Schwanberg, of Wausaw, F. W. Mueller, of Oshkosh, and A. C. Otto, of Grand Rapids; *Secretary*, E. G. Raeuber, of Milwaukee; and *Treasurer*, Henry Rollman, of Chilton.

NEW RULING ON UNCOMPLETED NARCOTIC ORDERS.

The Commissioner of Internal Revenue has ruled that, "where it is impossible to completely fill an order for narcotic drugs, the wholesaler should advise the customer that his order will be cut, a notation to that effect being made on the original order form and the customer being instructed to make the same endorsement on the duplicate form. When it is not contemplated to complete the order at a subsequent date, a separate letter should be written the customer to the effect that no more narcotic drugs will be supplied upon the incompletely filled order form, and that this letter closes the transaction so far as that particular order form is concerned."

A. PH. A. MEMBERSHIPS AWARDED DURING 1917 AS PRIZES BY COLLEGES, SCHOOLS, ASSOCIATIONS AND BOARDS OF PHARMACY

This list is not complete as we have not had returns from all schools, etc. When these are received the same recognition will be given in a succeeding number of the Journal.

BROOKLYN COLLEGE OF PHARMACY.—The Trustees of the College awarded to Rebecca Ocheret the prize for the Senior student who showed particular ability in manipulation, accuracy, handling and care of apparatus and in scientific investigation.

BUFFALO COLLEGE OF PHARMACY.—Four prizes were awarded for best general average during the Senior year. They were received by Mrs. Pauline S. Lucas, Arthur C. Elden, Clifford A. Noble and Raymond G. Helwig.

CLEVELAND SCHOOL OF PHARMACY.—The membership prize in Practical Pharmacy offered by Lewis C. Hopp was awarded to Sherman Baird Andrews.

FORDHAM UNIVERSITY COLLEGE OF PHARMACY.—Dean Dr. Jacob Diner reports that, owing to the fact that all of their graduates of 1917 voluntarily joined the American Pharmaceutical Association, no prize was awarded.

UNIVERSITY OF ILLINOIS SCHOOL OF PHARMACY.—The prize in Materia Medica was awarded to Rose J. Ruder, the one in Chemistry to Emil Paul Rauschert, and that in Pharmacy to Charles Bidwell. The Wm. Gray prize was awarded to Hans W. Vahlteich.

UNIVERSITY OF IOWA COLLEGE OF PHARMACY.—One prize for highest rank in competitive examination in Pharmacognosy was awarded to Edward J. Meister, by Dean W. J. Teeters. One prize for excellence in Organic Chemistry was awarded to Earl L. Hazeldine, by Gus. Scherling. A prize, a subscription to the JOURNAL A. PH. A., was awarded to Yula Rudolph Doden, by R. A. Kuever. The prize for excellence in Vegetable Microscopy offered by J. M. Lindly was awarded to Robert Henry Boerner.

COLLEGE OF JERSEY CITY.—The prize was awarded for proficiency in Pharmacy to Abraham Silverman, Ph.M.

LOUISVILLE COLLEGE OF PHARMACY.—The prize for highest general average in the Post-Graduate Course was awarded to John Luther Guice.

MASSACHUSETTS COLLEGE OF PHARMACY.—Five prizes were awarded; one offered by E. H. LaPierre in Pharmacy, to Stanley W. Foulser; one offered by Dean T. J. Bradley in Analytical Chemistry to Edward E. Orr; one offered by C. H. Packard in General Chemistry, to Eugene L. Sharkansky; one offered by J. G. Godding in Organic Chemistry, to Vincent J. Fitz-Simon; and, one offered by H. H. Smith in Materia Medica, to Edna M. Follensby.

NEW ORLEANS COLLEGE OF PHARMACY.—The prize was awarded for the third highest average in all branches to Frank J. Calderone.

NEW YORK COLLEGE OF PHARMACY.—Two prizes offered by J. L. Lascoff for best average in entire course were awarded to Julius Ginsberg and Leonard Steiger.

OKLAHOMA UNIVERSITY SCHOOL OF PHARMACY.—The John Barbour prize for highest average during Senior year was awarded to Donovan D. Mosher.

PHILADELPHIA COLLEGE OF PHARMACY.—Two prizes offered by C. H. LaWall for best term work in Theory and Practice of Pharmacy were awarded to Walding George Rupp and Howard William Griesing.

PITTSBURGH COLLEGE OF PHARMACY.—Five prizes were awarded: one in Materia Medica to Miss D. B. Webber, one in Pharmacy to Leon Rovno, one in Chemistry to H. F. Easly, one in Pharmacognosy to Miss Mabel F. Arney, and one in Pharmaceutical Products to Andrew Zacovic.

ST. LOUIS COLLEGE OF PHARMACY.—Membership prize offered by the College was awarded to Emmett Boone.

VALPARAISO SCHOOL OF PHARMACY.—The prize in Organic Chemistry, offered by G. D. Timmons, was awarded to G. W. Lloyd Plette; that in Manufacturing Pharmacy, offered by E. H. Wisner, to C. H. Bitowski; that in Analytical Chemistry, offered by W. O. Speer, to Thomas N. Beavers.

THE PHARMACIST AND THE LAW.

A BILL TO PROVIDE FOR A PHARMACEUTICAL CORPS NOW BEFORE CONGRESS.

In the House of Representatives, July 25, 1917, Mr. Edmonds introduced the following bill, which was referred to the Committee on Military Affairs, and ordered to be printed:

A BILL

To increase the efficiency of the Medical Department of the United States Army, to provide a Pharmaceutical Corps in that department, and to improve the status and efficiency of the pharmacists of the Army.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That hereafter there shall be attached to the Medical Department of the United States Army a Pharmaceutical Corps, composed of citizens of the United States, to perform the duties defined in this Act and such related duties as may be prescribed, from time to time, by the Surgeon General.

Sec. 2. That the Army Pharmaceutical Corps shall consist of one pharmacist director, with rank of major, who shall be chief of the Pharmaceutical Corps, five deputy pharmacist directors, with the rank of captain, and such number of pharmacists, with the rank of lieutenant, and of pharmacist apprentices, as may be needed for the service.

Sec. 3. That the Army Pharmaceutical Corps shall be charged with the following specific duties: To procure by purchase or manufacture all supplies of medicines, drugs, chemicals, pharmaceutical apparatus, and hospital and surgical dressings necessary for the Medical Department of the Army; to determine the quality and purity of such supplies; to have charge of the medical supply depots of the Army and the storage and safeguarding of such supplies; to provide for the issuance and distribution of such supplies and the dispensing of medicines in the various hospitals, dispensaries, infirmaries, trains, and camps of the Army; to properly care for, regulate the dispensing, and to systematically account for all spirituous liquors and habit-forming drugs purchased for the department; to procure by purchase or manufacture such drugs, chemicals, reagents, tests, and biologic products as are used in the laboratories and the medical and surgical practice of the department for the purpose of diagnosis, prophylaxis, or treatment; to account for all moneys received from sales of medical supplies, in accordance with the provisions of the Army regulations or disposed of by order of competent authority; to inspect the department's stores and supplies of drugs, medicines, hospital dressings, reagents, tests, and biologic products and determine their deterioration and fitness for use; to coöperate with the other branches of the department in rendering first aid and wound dressing and in the making of diagnostic and chemical tests; to establish and maintain a systematic course of study and training, including the advances made in medicine, pharmacy, and sciences allied thereto, to be pursued by the members of the Army Pharmaceutical Corps who are seeking promotion in the Corps.

Sec. 4. That the pharmacist director shall be a graduate of a reputable school of pharmacy, have had not less than five years of pharmaceutical experience, and have established a creditable record in the profession of pharmacy.

The duties of the pharmacist director shall include the following: To have supervision over the Army Pharmaceutical Corps; to see that discipline is maintained and duties are efficiently performed; to formulate rules and regulations, subject to the approval of the Surgeon General, for coördinating the work of the Pharmaceutical Corps with the duties of the other branches of the Medical Department; to approve all contracts for supplies procured by the Corps; to inspect, either in person or by deputy, all deliveries of supplies and pass upon the purity and quality thereof, and compliance with specifications and the acceptance or rejection; to have the authority to inspect the manufacture of such supplies, and to direct their manufacture in any factory or laboratory that may be taken over by the Government, or that may be established by the Government, for their production; to establish standards for supplies of nonofficial drugs, chemicals and preparations, and, where feasible, prescribe the methods of assay for these; to publish, with the approval of the Surgeon General, formulas for nonofficial preparations, reagents, and tests used in the Army Medical Department, and all formulas so published shall be authoritative in the Army Medical Department; to recommend alternates or

substitutes for proprietary, expensive, rare, or unobtainable drugs or preparations; to prepare specifications and estimates for Army medical supplies; to pass upon requisitions for supplies; to provide regulations for the storage, safeguarding, and preservation of Army medical supplies, and the distribution and issuing of such supplies; to see that accounts of the receipts and disbursements of all supplies are properly kept, with special records of the purchases and disposition of spirituous liquors and habit-forming drugs; to have inspections made of the medical supplies, and recommend appropriate disposition of condemned, deteriorated or unreliable supplies; to preserve the files, correspondence, and official records of the corps; to prepare a syllabus covering a systematic course of professional study to be followed by members of the Pharmaceutical Corps; to coöperate in the professional examinations of applicants for enlistment in the pharmaceutical service, or for promotion within the corps; to recommend transfer of members of the Pharmaceutical Corps and promotion for service or special recognition for distinguished service. He shall outline a course of instruction for pharmacists if an Army pharmacist training school is established.

In the absence of the pharmacist director a deputy pharmacist director shall be named as acting pharmacist director. The various duties specified above as within the province of the pharmacist director, with the approval of the Surgeon General, may be distributed or assigned to the deputy pharmacist directors.

The deputy pharmacist directors shall be pharmacists of unquestioned professional repute who are graduates of reputable schools of pharmacy and have had not less than five years of pharmaceutical experience.

Any American citizen, graduate of a reputable school of pharmacy, of good moral character and between twenty-one years and forty-five years of age, both inclusive, who can pass the usual physical examination required for appointment in the Medical Corps and the professional examinations, which shall include tests of skill in practical pharmacy and of proficiency in the usual subjects of a standard school of pharmacy course, may be appointed as a pharmacist in the Pharmaceutical Corps.

An original appointment as pharmacist under this Act shall entitle the appointee to the rank and commission of second lieutenant. After the expiration of the first five years of service, with honorable discharge, the pharmacist may reënlist at any time within six months from the date of expiration of such prior service, and he may then apply for examination for promotion, and if his physical examination and the professional examination in subjects of advanced pharmaceutical education are satisfactory, he shall be eligible for promotion to the rank and commission as first lieutenant, Pharmaceutical Corps. After fifteen years of service in the Pharmaceutical Corps a pharmacist with the rank of first lieutenant, Pharmaceutical Corps, may apply for examination for promotion. If he successfully passes the necessary examination in post-graduate pharmaceutical studies, and if in the opinion of the pharmaceutical director such promotion is merited, he shall be promoted to the rank and commission of captain, Pharmaceutical Corps.

Any citizen of the United States between seventeen years and thirty-five years of age, both inclusive, who can pass the necessary physical and preliminary educational examination prescribed by the Secretary of War may enlist as a pharmacist apprentice. Pharmacist apprentices shall act as assistants to the pharmacists and to the Hospital Corps. After serving for one year in this capacity the pharmacist apprentice may, with the approval of the pharmacist or the surgeon under whom he has served, apply for examination for promotion; and if he passes the examination in preliminary education and the elementary pharmaceutical branches, he shall be promoted to the grade of pharmacist apprentice, first class, with rank as sergeant. After five years of service, with honorable discharge, the pharmacist apprentice may reënlist and may apply for examination and promotion to the grade of pharmacist with commission as second lieutenant; *Provided*, That after two years of service the Secretary of War, upon recommendation of the pharmacist director, may grant to a pharmacist apprentice sufficient leave of absence from the service to permit the apprentice attending a school of pharmacy to fit himself for advanced rank in the Pharmaceutical Corps. Such leave of absence shall be without pay, but shall not be deducted in computing the length of service.

The Secretary of War is authorized to appoint boards of three examiners to conduct the professional examinations herein prescribed; *Provided*, That at least one member of each of the boards so appointed shall be a pharmacist.

That, whereas there are now in the service of the War Department a number of pharmacists and druggists ranking as master hospital sergeants, hospital sergeants, sergeants first class, and sergeants, all such shall be eligible to transfer to the Pharmaceutical Corps created by this Act and to the service, rank, pay, and promotion in rank as provided herein, and that the time already spent as pharmacists in the War Department shall be computed as part of their service in the Pharmaceutical Corps.

That in emergencies the pharmacist director, upon the recommendation of the Surgeon General, and with the approval of the Secretary of War, may appoint as many contract pharmacists as may be necessary, at a compensation not exceeding $150 each per month, and provided that the age limit and professional examination may be waived in the case of any contract pharmacist whose character, experience, and professional education is deemed by the pharmacist director to be satisfactory. The temporary appointment of a contract pharmacist shall not carry commission or right of retirement in accordance with the Army Regulations.

Sec. 5. That all appointees authorized by this Act shall take rank and precedence in the same manner in all respects as in the case of appointees to the Medical Corps of the Army, and shall not exercise command over persons other than those in the Pharmaceutical Corps and such enlisted men as may be detailed to assist them by competent authority.

That all officers of the Pharmaceutical Corps shall receive the same pay, awards, and allowance as the officers of corresponding rank and length of service in the Medical Corps of the Army and shall be eligible to retirement in the same manner and under the same conditions.

That the pay of the pharmacist apprentice shall be $33 per month and that of the pharmacist apprentice first class, with rank of sergeant, shall be $37 per month, and for each reënlistment in this service they shall receive the usual increase allowed in the Army for honorable discharge and reënlistment.

Sec. 6. That all laws and parts of laws inconsistent with the provisions of this Act be, and the same are hereby, repealed.

H. R. 5531—2.

FIRST ARRESTS MADE UNDER PENNSYLVANIA'S NEW ANTI-NARCOTIC LAW.

The first arrests under the new Pennsylvania anti-narcotic law were made in Philadelphia July 31. The law makes it a misdemeanor to have the proscribed drugs in one's possession, unless the possessor is so authorized under the law.

THE NEW YORK ANTI-NARCOTIC LAW IS SAID TO BE DEFECTIVE.

The Whitney bill requires hospitals, etc., to use order blanks for purchasing narcotics but fails to enumerate them among those entitled to order blanks; there are said to be a number of other flaws in the act and some will require correction. The law was to have become effective July 1, but because of the non-receipt of the necessary order blanks, which are essential to its enforcement, August 1 was named as the day on which the law shall become effective.

UNITED STATES PUBLIC HEALTH SERVICE.

List of changes of duties and stations of commissioned and other officers of the United States Public Health Service for the seven days ended July 18, 1917.

Prof. E. B. Phelps. Proceed to Chicago and other places in Illinois, Indiana and Ohio, on special temporary duty. July 16, 1917.

Phar. C. C. Cannon. Relieved at Stapleton, N. Y. Report at Hygienic Laboratory, Washington, D. C. July 9, 1917.

Phar. Clyde Ritter. Relieved at Hygienic Laboratory. Proceed to Marine Hospital, St. Louis, Mo. July 9, 1917.

Phar. C. H. Parker. Relieved at St. Louis, Mo. Proceed to Cape Charles Quarantine Station. July 9, 1917.

Phar. R. D. Kinsey. Relieved at Cape Charles Quarantine Station. Proceed to Stapleton, N. Y., Marine Hospital. July 9, 1917.

Sanitary Engineer H. W. Streeter. Proceed to Des Moines, Iowa, on special temporary duty. July 16, 1917.

Sanitary Engineer L. C. Frank. Proceed to Chillicothe, Ohio, on special temporary duty. July 16, 1917.

Sanitary Chemist H. B. Corson. Proceed to Chicago, Ill., on special temporary duty. July 17, 1917.

Sanitary Engineer W. D. Wrightson. Relieved at Chicago, Ill. Proceed to Louisville, Ky., on special temporary duty. On completion of this duty, proceed to such places in States south of the Potomac and east of the Mississippi Rivers as may be necessary in connection with malaria studies, with station at New Orleans, La. July 6, 1917.

CHANGES OF ADDRESS.

All changes of address of members should be sent to the General Secretary promptly.

The Association will not be responsible for non-delivery of the Annual Volume or Year Book, or of the JOURNAL unless notice of the change of address is received before shipment or mailing.

Both the old and the new address should be given thus:

HENRY MILTON,
From 2342 Albion Place, St. Louis, Mo.
To 278 Dartmouth St., Boston, Mass.

Titles or degrees to be used in publications or in the official records should be given, and names should be *plainly* written, or typewritten.

CHANGE OF ADDRESSES SINCE JUNE 18, 1917.

BREWER, J. S.,
From 4603 Westminster Pl., St. Louis, Mo.
To 812 Goodfellow Ave., St. Louis, Mo.

SHULTZ, M. E.,
From c/o Winkler Drug Co., Ft. Meyers, Fla.
To 213 First St., Ft. Meyers, Fla.

BROWN, L. A.,
From 425 Transylvania Park, Lexington, Ky.
To c/o United Drug Co., Anal. Lab., Boston, Mass.

WOOYENAKA, KEIZO,
From 210 Harajuku, Sendagaya-cho, Tokio, Japan.
To 1021 Higashi-Nakano, Nakano, Toyotamagum, Tokio, Japan.

VITOUS, WALTER J.,
From Doty, Wash.
To c/o Morton Drug Co., Morton, Wash.

KIMBALL, C. O.,
From U. S. Navy, U. S. S. Cummings, New York, N. Y.
To U. S. Naval Training Station, Norfolk, Va.

BLOME, W. H.,
From 4 N. Baldwin Ave., Detroit, Mich.
To 426 Baldwin Ave., Detroit, Mich.

JACKMAN, W. F.,
From 178 Colburn Pl., Detroit, Mich.
To 206 Webb Ave., Detroit, Mich.

WARREN, L. E.,
From 4525 N. Robey St., Chicago, Ill.
To 3833 Flad Ave., St. Louis, Mo.

WHITE, J. L.,
From 130 First St., N. W., Washington, D. C.
To Residence Unknown.

BOTE, L. E.,
From U. S. S. Wisconsin, Philadelphia, Pa.
To Hospital Corps Training School, Great Lakes, Ill.

DEAN, C. P.,
From 11 Bull St., Newport, R. I.
To Hospital Corps Training School, Great Lakes, Ill.

GINSBERG, JULIUS,
From 333 E. 16th St., New York, N. Y.
To 115 W. 68th St., c/o N. Y. College of Pharm., New York, N. Y.

DECEASED SINCE JUNE 18, 1917.

FEIL, JOSEPH, Cleveland, Ohio.
MOSCHEL, GEO. WM., Spring Valley, Ill.
ISAKOVICS, A. V., Monticello, N. Y.
SCHLOTTERBECK, J. O., Ann Arbor, Mich.
WEINSTEIN, JOSEPH, New York, N. Y.

CHANGED FROM MEMBERSHIP ONLY TO REGULAR MEMBER.

HAMILTON, H. C.,
c/o Parke, Davis Co., Detroit, Mich.

CHANGED FROM REGULAR MEMBER TO DUES ONLY

YOUNG, G. O.,
Buckhannon, W. Va.

BOOK NOTICES AND REVIEWS.

Year Book of the American Pharmaceutical Association, 1915. Volume 4. Containing the Fifty-eighth Annual Report on the Progress of Pharmacy, and the Constitution, By-Laws, and Roll of Members. Corresponding to Volume Sixty-three of the former Proceedings of the American Pharmaceutical Association. Published by the American Pharmaceutical Association, 1917.

Right in the midst of the still unsettled controversy over the continuance or discontinuance of the Year Book of the American Pharmaceutical Association, we are furnished with one of the best arguments for continuing this valuable pharmaceutical reference work, namely, the appearance of the Year Book for 1915.

After glancing carefully through the con-

tents of this volume, we are convinced that the best interests of pharmacy, as well as of the American Pharmaceutical Association demand that the publication of this work be continued.

Not long ago a well-known pharmaceutical educator declared at one of our State Association meetings that a large proportion of the queries he is called upon to answer for students and pharmacists can be answered most satisfactorily by referring to the Year Book of the A. Ph. A. Those who are familiar with past editions of the Year Book will readily bear out this statement. It is a compliment to both the Reporter on the Progress of Pharmacy and the Association itself.

The 1915 Year Book represents the same high order of work as its predecessors. The abstracts are sufficiently elaborate to convey the gist of articles appearing in the various foreign and American publications, yet they are concise.

For the busy pharmacist who has little time to more than "skip" through his journals as they come in from time to time, the Year Book is an important asset, as the Reporter on the Progress of Pharmacy acts as a "Reading Editor" for him, culling out the essentials from the non-essentials and giving him necessary references in case he wants to look up the originals.

It has been stated that the Year Book is so far behind as to detract from this feature but there were good reasons why the publication was behind and from the present outlook it will not be long before the Year Book will have "caught up" and then even this objection will have been overcome.

For the laboratory worker, teacher and scientist, the book is indispensable and has always been considered so.

In a brief review it is difficult to single out and comment on the many excellent features of this work which deserve extended comment. It will perhaps suffice to say at this point that every member of the A. Ph. A. and many non-members will find information of great value in the Year Book and even a brief perusal of its contents will convince anyone with an open mind of its great worth.

In conclusion, credit must be given Prof. J. A. Koch, under whose tenure as Reporter on the Progress of Pharmacy much of the work in this volume was completed and to Prof. H. V. Arny, the present Reporter on the Progress of Pharmacy who completed the task but who in the preface modestly assumes credit only for possible errors. It is important for the future of pharmacy that the Year Book of the American Pharmaceutical Association continue to appear.

ROBERT P. FISCHELIS.

*Practice of Pharmacy**. Remington.—Only by contrasting the past with the present, can one obtain a balanced view of the progress the professions and sciences are making, in the passing along. In this connection, this reviewer well recalls the announcement of the first issue (in 1885) of Professor Remington's great publication, *Practice of Pharmacy*, and the interest it excited in the pharmaceutical world, which so anxiously awaited this contribution to American pharmaceutical literature. With reflective thought, this writer, for contrasting purposes, before attempting his review, sought that old volume, thumb-worn and much stained by laboratory spatterings. As its pages were turned, came the pleasure one experiences when, after an absence of years, one meets an old friend, and yet that publication, so complete in itself at the time of its first appearance in one volume, has been five times revised, each revision being so amplified as to present at the time of issue, the acme of pharmaceutical art. Notwithstanding this, the author, Professor Joseph P. Remington, in the enthusiasm of his profession, was ever on the lookout for opportunities for revision betterments. Searching current literature of the passing day, active in scientific and society problems, ever eager to catch what was best in the passing along, he thus made each successive edition the last word in pharmaceutical advancement. Needless to say, Volume I of the fifth revision,

**The Practice of Pharmacy.* Vol. I, Parts I and II. A Treatise on the Modes of Making and Dispensing Official, Unofficial, and Extemporaneous Preparations, and Descriptions of Medicinal Substances, their Properties, Uses, and Doses. Intended as a Hand-Book for Pharmacists and Physicians, and a Text-Book for Students. Sixth Edition. By Joseph P. Remington, Ph.M., Phar.D., F.C.S., Chairman of the Committee of Revision of the Pharmacopoeia of the United States of America; Dean Professor of Theory and Practice of Pharmacy, and Director of the Pharmaceutical Laboratory, in the Philadelphia College of Pharmacy; Pharmaceutical Editor of the United States Dispensatory; Honorary Member of the Pharmaceutical Society of Great Britain, etc. Assisted by E. Fullerton Cook, P.D., Associate Professor of Operative Pharmacy and Instructor in Commercial Pharmacy in the Philadelphia College of Pharmacy; Member of the Committee of Revision of the National Formulary. With over Eight Hundred Illustrations. Published by the J. B. Lippincott Company, Philadelphia. Prices, Volumes I and II, regular Cloth binding, each, $4.50; complete in one volume, bound in Buckram, $8.00.

now before us (*Sixth Edition, 1917*), far excels all preceding editions.

Our part is not, however, to linger over Professor Remington's past contributions to the cause of pharmacy (this masterpiece of one friend of old), but to review (the work that is now appearing in two volumes), Volume I of the 1917 edition. In this we find a successful effort both to amplify past subjects, where needed, and to condense those not now important. The first object is accomplished by wisely selected additions and explanations of advances made in pharmaceutical processes, pharmaceutical compounds and pharmaceutical problems, fortified liberally with unofficial formulae; the second by the introduction of condensed tables and classified arrangements, showing at a glance formulas that would otherwise require pages of detail.

Pharmacists will be pleased to find that preparations dismissed from past Pharmacopoeias and yet much prescribed by physicians, are not by Professor Remington considered obsolete, but that, with discriminative selection, he has given proper recognition to such as are important. This is a very essential feature of a work on general pharmacy, because the dismissing of a preparation from the Pharmacopoeia by action of a Committee, neither dismisses it from therapeutic use, nor absolves the pharmacist from its recognition and preparation. Indeed, many preparations dropped from Pharmacopoeias of times gone by (as well as many drugs reported upon adversely by authoritative vote), might well be reintroduced if (as some of us believe), the object of a Pharmacopoeia is to give to the medical and pharmaceutical professions standards that should be at their command, where the object is the preparing of legitimate prescriptions, or a knowledge of the ingredients of a compound that is being prescribed. Professor Remington's revised publication thus especially appeals, as it overcomes many shortcomings in this direction, supplying the needful formulas and processes. We find also in this volume, formulas for making numerous Fluidextracts and other preparations, such as emulsions, that have never been awarded a position in any Pharmacopoeia, but which are ever in more or less demand, through physicians' prescriptions.

Each successive edition of *"Remington's Pharmacy,"* as is known to all practical pharmacists, has been prolific in illustrations. This is a much valued feature, for few will deny that illustrations are all-important, the "eye-touch" being, with many persons, even more effective as an instructor, than the ear. Indeed, what word description could intelligently represent such figures as 327, 327*a*, and 327*b* (pages 242–243), illustrative of the "international disk filter," the "centrifugal filter," and the "centrifugal filter, interior?" The present volume has been much enriched in this direction by the art of Professor Remington's son, Mr. J. Percy Remington, B.S., P.D., whose outline drawings and cuts, a dozen at least, add a feature that will be much appreciated.

Recognizing that the majority of the physicians of America still use (and will long continue to use), quantity expressions of the past, to the neglect of the metric system, the present work gives, in each official formula, parallel amounts, the metric system being expressed in black-face type, the apothecary's system, formerly official (designated as "old form"), being printed in light-face type. Every possessor of the work is thus fortified to prepare these compounds, without resorting to tedious calculations, with connected liability to error. Let us present verbatim from page 566 one such compound, official in the Eighth Edition of the Pharmacopoeia, and much used at the present time:

FLUIDEXTRACTUM APOCYNI. N. F. **Fluidextract of Apocynum**
[Fldext. Apocyn.]

	Metric	Old form
Apocynum, in No. 30 powder	1000 Gm.	50 oz. av.
Glycerin,		
Alcohol,		
Water, each, a sufficient quantity,		
To make	1000 mils	3 pints

Prepare a Fluidextract by Type Process B (see page 521), using a mixture of 100 mils [old form 4 fl. oz. 384 minims] of glycerin, 600 mils [old form 28 fl. oz. 384 minims] of alcohol, and 300 mils [old form 14 fl. oz. 192 minims] of water as Menstruum I, and a mixture of 3 volumes of alcohol and 2 volumes of water as Menstruum II.

The term "cubic centimeter (Cc.)," so long in use in chemical and pharmacopoeial practice (officially introduced 1890), has been replaced throughout by the abbreviation *"mil"* or *"ml"* (a contraction of the term *milliliter*), this being adopted and authorized by the present (*Ninth*) edition of the *United States Pharmacopoeia*, the *National Formulary*, and the *United States Bureau of Standards*. These terms, however, are but symbolic expressions, without appreciable differences, the *mil* being practically equivalent to the cubic centimeter, the variation being about $1^1/_2$ minims to the gallon.

One feature of the present edition is a classified development of past arrangements of formulae. See, for example, the tables that include the Syrups (pages 321–325), of the Pharmacopoeia (Ninth Edition), the National Formulary, and the unofficial syrups, such as Cascara Aromaticus, of the British Pharmacopoeia.

Where possible, such a class is arranged in the order of "relative strengths." This is important, because, for example, among the Pharmacopoeial Tinctures, the student can at once catch the fact that *Tinctura Opii Camphorata* is of low relative strength, representing but four-tenths of one percent (0.4) of opium, and that, progressively increasing, other tinctures fall in their proper places, till the list closes with *Limonis Corticis*, which represents fifty percent fresh lemon peel. The same arrangement applies to the preparations of the National Formulary, and to the unofficial preparations. Other classes, as Fluidextracts, are classed according to their method of preparation, or their alcoholic strength, while such substances as "Extracts, Pilulae, or Powdered Extracts," are grouped according to the menstruum strength used in their manufacture.

Pages 215 to 219, inclusive, are devoted to the solubility of official substances in water and in alcohol, a feature of immense importance to everyone concerned in medicinal pharmacy and chemistry, which so largely dominates pharmaceutical "compounds," and which, under the headings, "*Colloidal Solutions*" (see pages 220–221), and "Dialysis" (pages 266–268), are so aptly described by the author. In this reviewer's opinion, one feature of what is now known as "*Physical Chemistry*" (which includes "*Colloidal Chemistry*") is now opening a door, too long closed, that in the field of legitimate science will give ever-widening opportunities to one concerned in the art of pharmacy.

A comprehensive view of the scope of Volume I of this *Practice of Pharmacy* is afforded by the chapters heading its two great subdivisions: Part I (*Theoretical and Practical Pharmacy*), devoted to theory, methods, apparatus, etc., contains twenty chapters beginning with *Metrology*, and closing with *Percolation*. Part II (*Official Pharmacy*), devoted chiefly to manipulative processes and desirable unofficial products, contains eleven chapters, beginning with "*Aqueous Solutions*," and closing with "*Solid Official Preparations Made without Percolation*."

But enough has been said concerning the principal features of a work that soon will be in the hands of every progressive American pharmacist, physician and student concerned in either pharmacy or medicine. To attempt to enter into discursive details would be to write a volume. Sufficient is it now to announce that we have here the culmination of the pharmaceutical research of its author, Professor Joseph P. Remington, known world wide, for decades, as a pharmaceutical authority, twice Chairman of the Committee of Revision of the Pharmacopoeia of the United States, ably assisted by his colaborer, Professor E. Fullerton Cook, and by B. A. Heims, who is credited in the Preface as having "given valued assistance in every part of the revision."

From some special viewpoint, an enthusiast might probably desire to see a certain section amplified, or conversely, another section shortened. Perhaps a different view than that presented, might even be held concerning some of the theoretical phases that, presenting two viewpoints, admit of discussion. In every work touching science such opportunities are thus afforded a reviewer to advance his personal opinions on questions that, had the author recorded the opposite of what is presented, would not have prevented adverse criticism. The present reviewer does not propose to indulge such opportunities as these, if any there be, for fault finding, in the direction of this admirable publication.

Briefly, in this reviewer's opinion, Volume I of Remington's "*Practice of Pharmacy*" carries all the features of the past publications embodied in its scope; each section is made complete, where the science and the art of pharmacy has progressed sufficiently to warrant additions; obsolete formulas and processes have been revised or excluded; desirable tables and classified sections have been added; chemical nomenclature and pharmaceutical theories have been brought to date; formulas and processes have, by permission, been included of desirable portions of the text of the U. S. Pharmacopoeia and the National Formulary, etc., etc. The book is one that should undoubtedly be in the hands of every active pharmacist and student, as well as of every progressive physician.

JOHN URI LLOYD.

WHITE'S VEST POCKET SUNDAE FORMULARY. A collection of original and carefully selected standard formulas for the preparation of plain and fancy sundaes and the manufacture of dressings and toppings, arranged in alphabetical order so that they may be instantly accessible. Over 1,500 formulas. By E. F. White. 200 pages, 3 × 6 inches. The Spatula Publishing Company, Boston. Price, $1.00.